



ELECTRIC TOOLS

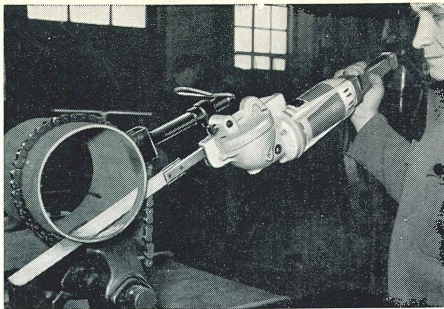
NORMAL FREQUENCY

Quality in modern design



C. & E. FEIN · STUTTGART (Germany)

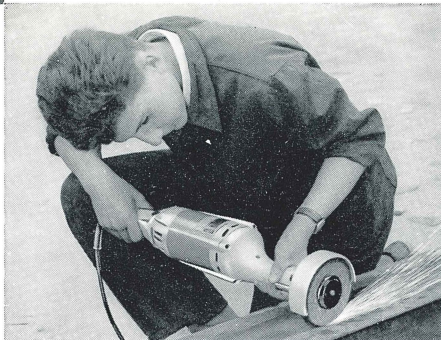
THE WORLD'S FIRST PRODUCER OF ELECTRIC TOOLS · FOUNDED IN 1867



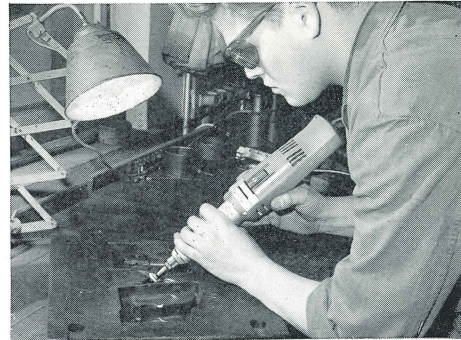
Cutting pipes with Hack Saw type ASf 663



ELECTRIC TOOLS



Grinding with Hand Grinder type MShy 663



Grinding with Hand Grinder type MSh 636

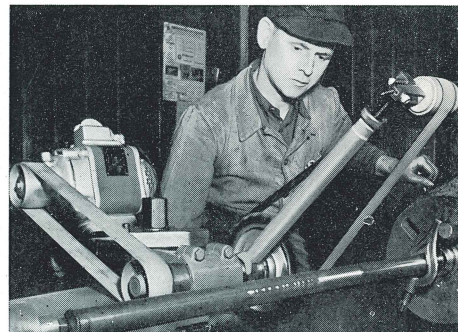


Trimming beads with Angle Grinder type MSf 679

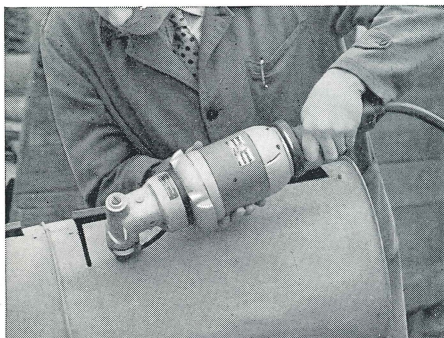
FOR SIMPLER METHODS



Trimming welded seams with Angle Grinder type MSfv 656-1

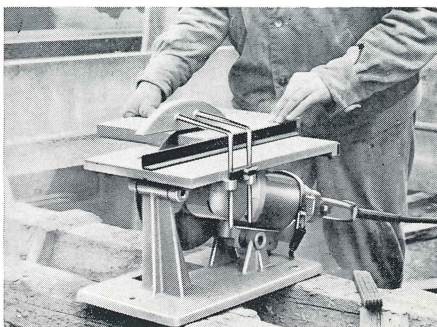


Polishing a shaft with Lathe Grinder type MB and Small Belt Grinder type HBG

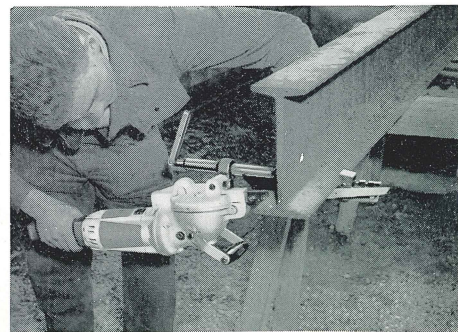


Cutting out an aperture with Nibbler type RSs 60

CAN INCREASE OUTPUT



Cutting stone with Angle Grinder type MSf 679 and Cutting Table Ct 1 a



Cutting profile with Power Hack Saw type ASf 663



ELECTRIC TOOLS

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Drills

Angle Drills
Percussion Drills

Accessories
for Drills

Tappers
Screwdrivers

Impact
Wrenches

Tool Post
Grinders

Contact Belt
Grinders
Balancers

Angle
Grinders

Shears
Nibblers
Hack Saws

Plug Connections
Transformers

IMPORTANT:

PLEASE STATE CURRENT, VOLTAGE AND FREQUENCY WHEN ORDERING OR REQUESTING QUOTATIONS.

All prices and specifications are subject to alteration. Illustrations do not necessarily in every detail correctly represent the article at the time of ordering or delivery.

Our standard power units for Electric Tools are:

~ **SINGLE PHASE A. C. MOTORS**

==/~ **UNIVERSAL MOTORS**

can be connected to any single phase circuit. They are used for AC/DC up to 60 cycles.

Usual windings for 110, 125, 220 Volts

3 ~ THREE PHASE A. C. MOTORS

Squirrel Cage Motors for 3 ph. AC

Usual windings for 220, 380 Volts, 50 cycles

== **D. C. MOTORS**

Usual windings for 110 and 220 Volts

All specifications are in accordance with the VDE-regulations
Other voltages and frequencies available, too



Double insulated

Machines bearing this mark are double insulated as per VDE 0740 and radio suppressed. These machines possess no earth wire, offer increased safety against shocks and can be operated from any socket.



Electric Tools

Type of Current

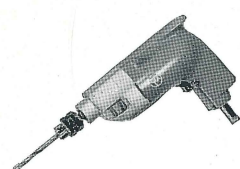
- D.C. only
- ~ single-ph.A.C.
- /~ D.C./single-ph.A.C. (universal motor)
- 3 ~ Three-phase A.C.
- double insulated and radio suppressed

Do not forget when ordering or inquiring to state
THE TYPE OF CURRENT, VOLTAGE AND FREQUENCY

Portable Electric Drills with Universal Motor —/~

Type ~ / ~		Capacity				Speed R. P. M.		Input	Output	Tapered Spindle or Morse Taper Socket	Net weight	
standard voltages	low tension 42 Volts	in steel		non-ferrous metals		full load	no load	in Watts			lbs.	kgs.
		in.	mm	in.	mm							
ASy 636 □	ASy 736	3/16	4	1/4	6	1800	3500	230	115	B 10	2,65	1,2
ASz 636 □	ASz 736	1/4	6	5/16	8	1050	1770	230	115	B 12	2,75	1,25
ASk 636 □	ASk 736	5/16	8	3/8	10	770	1300	230	115	B 12	2,75	1,25
ASz 648 d □	ASz 748 d	1/4	6	5/16	8	1600	2600	500	300	B 16	6,4	2,9
ASz 648 b □	ASz 748 b	3/8	10	1/2	13	700	1100	500	300	B 16	6,4	2,9
ASz 648 a □	ASz 748 a	1/2	13	5/8	16	440	700	500	300	B 16	6,4	2,9
ASk 654-1 □	ASk 754-1	5/8	15	3/4	19	410	630	360	200	MT-Socket ⎵ 2 3 3	9,3	4,2
ASk 658 □	ASk 758	3/4	19	7/8	21	350	610	540	320		12,6	5,7
ASk 672 □	—	1	26	1 1/16	27	250	370	1050	650		18,8	8,1
—	ASk 772	1	26	1 1/16	27	250	370	1000	500		18,8	8,1

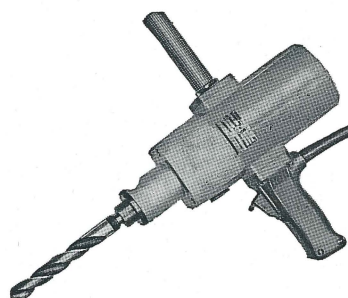
All drills normally equipped with 10 ft. (3 m) cable, types ASz 648 on demand with second handle MZ 19-32



DS 636 □
DSk 636 □



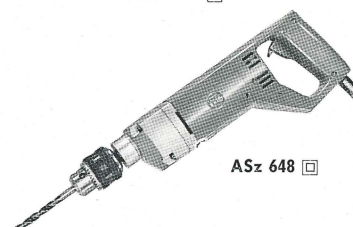
DS 648 □



DSk 658 □



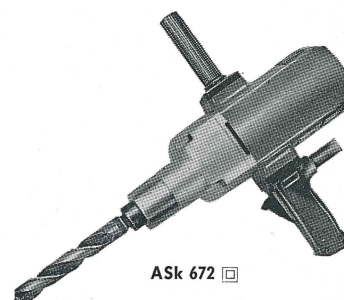
ASy 636 □
ASz 636 □
ASk 636 □



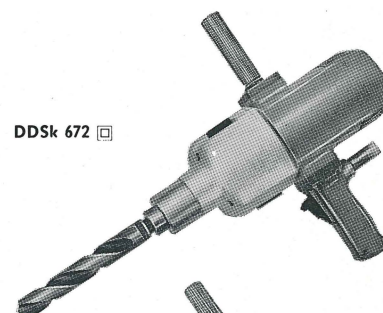
ASz 648 □



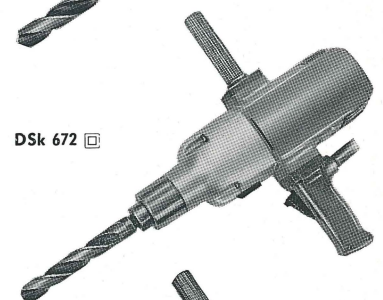
ASk 658 □



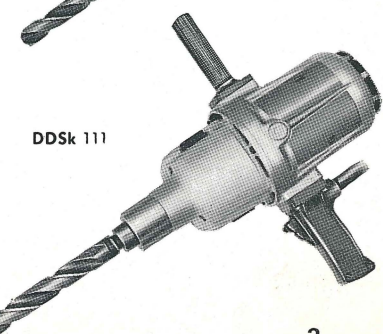
ASk 672 □



DDSk 672 □



DSk 672 □



DDSk 111

Multi Speed Electric Drills

Type		Capacity				Input	Output	Speed R. P. M.		bore spindle	Net weight	
standard voltages	low tension 42 Volts	in steel in. mm	in soft wood in. mm			in Watts		drill spindle under load	no load		lbs.	kgs.
—/~	—/~	1/4	6	1/2	12	230	115	850/1850	3100	B 12	3,1	1,4
DS 636 □	DS 736	5/16	8	9/16	14	230	115	430/1050	1700	B 12	3,3	1,5
DSk 636 □	DSk 736	5/8	16	1 3/16	30	500	300	370/900	1400	B 16	7,3	3,3
DS 648 □	DS 748	3/4	19	1 3/8	35	540	320	200/420	720	MT-Socket	13,5	6,1
DSk 658 □	DSk 758	1	26	2	50	1050	650	185/370	540		20,4	9,2
DSk 672 □	—	1	26	2	50	1000	500	185/370	540		20,4	9,2
—	DSk 772	1 1/4	32	2 3/16	55	1050	650	120/190/330/520	760		22	10,0
DDSk 672 □	—	1 1/4	32	2 3/16	55	1000	500	120/190/330/520	760	MT-Socket	22	10,0
—	DDSk 772	1 1/4	32	2 3/16	55	960	650	100/150/260/420	—		27,7	12,6
3 ~	3 ~											
DDSk 111	DDSk 111 K	1 1/4	32	2 3/16	55							

Machines equipped with 10 ft. (3 m) cable. Machines with M. T. Socket with tube handle and drift.
DS 648 with second handle MZ 19-32

Heavy Duty Electric Drills for D. C. or 3 ph. A. C.

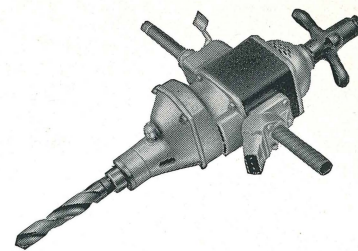
With reversing switch for forward and reverse action

Type		Capacity						Speed R. P. M.	Input	Output	M. T. Socket	Net weight	
standard voltages 3 ~	low tension 3 ~ 42 V	in steel		in soft wood		Reaming			in Watts			lbs.	kgs.
		in.	mm	in.	mm	in.	mm						
AB 120 b	AB 120 bK	7/8	23	2	50	3/4	18	200	720	500	2	31	14
AB 140 a	AB 140 aK	1 1/4	32	2 3/8	60	1 1/16	26	160	1100	850	3	42	19
AB 146 a	AB 146 aK	2	50	4	100	1 5/8	40	100	1900	1500	4	58	26,5
On demand with star-delta switch EZ 4-7-2													

On demand with star-delta switch EZ 4-7-2

All drills equipped with 10 ft. (3 m) cable, tube handle and drift.

Feed screws: see page 8



AB 120 b, AB 140 a, AB 146 a

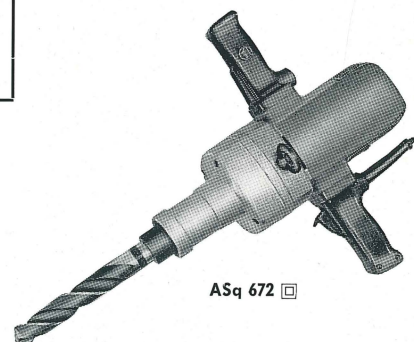
Slow Speed Electric Drills

Type		Reaming ϕ		Tube expanding inside dia.		Tapping		Speed R. P. M.	Input	Output	M. T. Socket	Net weight		
standard voltages	low tension 42 Volts	in.	mm	in.	mm	ϕ	ϕ		in Watts			lbs.	kgs.	
ASq 658 □	ASq 758	3/4	19	for light tube expanding				125	450	260	2	13	5,9	
ASq 672 □	ASq 772	1 7/16	40	2 1/2	65	M 30	R 1"	60	900	500	4	22	10	
3 ~	3 ~													
BQ 120-1	BQ 120-1 K	1 7/16	40	2 1/2	65	M 30	R 1"	65	720	500	3	34	15,5	
BQ 140-1	BQ 140-1 K	2	50	3 1/2	90	M 36	R 1 1/4"	55	1100	850	4	41,8	19	
BQ 146	BQ 146 K	2 3/4	70	6	150	M 48	R 2"	34	1900	1500	5	81,4	37	

ASq equipped with 3 m cable and drift, BQ with 3 m cable, drift, tube handle, spade handle



ASq 658 □



ASq 672 □

Driver Chucks for Hand Drills BQ

Order Reference	Morse Taper K	for	Net weight	
			lbs.	kgs.
MZ 30-2	3	BQ 120-1	1,5	0,7
MZ 30-3	4	ASq 672, BQ 140-1	3,1	1,4
MZ 30-4	5	BQ 146	11	5

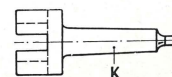
Feed Crosses

for	Order Reference	S		lbs.	kgs.
		in.	mm		
MZ 30-2	MZ 30-5	3/8	9	0,3	0,14
	MZ 30-6	1/2	12	0,3	0,14
	MZ 30-7	37/64	14,5	0,3	0,13
	MZ 30-8	5/8	16	0,37	0,17
	MZ 30-9	3/4	18	0,35	0,15
	MZ 30-10	13/16	20	0,3	0,14

for	Order Reference	S		lbs.	kgs.
		in.	mm		
MZ 30-3	MZ 30-13	37/64	14,5	1,0	0,47
	MZ 30-15	3/4	18	0,9	0,43
	MZ 30-16	13/16	20	0,9	0,42
	MZ 30-23	3/4	18	3,9	1,75
MZ 30-4	MZ 30-26	15/16	24	3,7	1,70
	MZ 30-27	1 1/32	26	3,7	1,65
	MZ 30-28	1 5/32	29	3,6	1,61
	MZ 30-29	1 1/4	32	3,4	1,55



Feed Cross



Driver Chuck



Electric Tools

Type of Current

- D.C. only
- ~ single-ph.A.C.
- /~ D.C./single-ph.A.C. (universal motor)
- 3 ~ Three-phase A.C.
- double insulated and radio suppressed

Do not forget when ordering or inquiring to state
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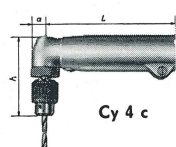
Right Angle Drills

Type —/~		Capacity				Speed R. P. M.		Input	Output	Tapered Spindle or M. T. Socket	Net weight	
standard voltages	low tension 42 Volts	in Steel		non ferrous metals		full load	no load	in Watts			lbs.	kgs.
		in.	mm	in.	mm							
ASzx 636 □ ¹⁾	ASzx 736	1/4	6	5/16	8	950	1650	230	115	B 10	3,1	1,4
ASzx 654-1 □ ²⁾	ASzx 754-1	5/8	15	3/4	19	360	550	360	200	M. T. 1	8,9	4,0

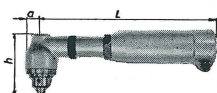
Machines equipped with 10 ft. (3 m) cable. On special request:

¹⁾ Chuck up to 1/4" (6 mm): MZ 7-2 Chuck up to 5/16" (8 mm): MZ 7-29

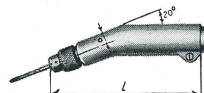
²⁾ Chuck up to 3/8" (10 mm): MZ 7-4 M. T. Arbor: MZ 11-6 Feed Screw: MZ 33-12-1



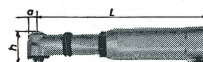
Cy 4 c



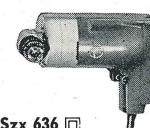
Cy 4 f



Cy 4 w

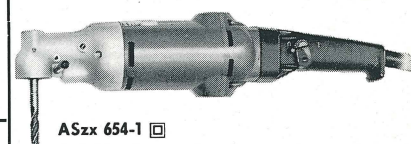


Cy 4 g



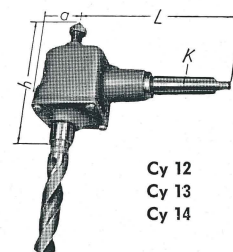
ASzx 636 □

height of gear head
with chuck = 3 1/2" (90 mm)



ASzx 654-1 □

height of gear head
with chuck = 5 1/8" (130 mm)
without chuck = 2 3/8" (60 mm)

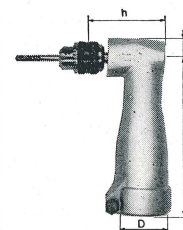


Cy 12
Cy 13
Cy 14

Angle Drilling Attachments (ratio 1:1)

Type	Capacity in steel		for use with Electric Drill Type	Tapered Spindle or M. T. Socket DIN	Bore Ø		Dimensions						Net weight	
	in.	mm			in.	mm	a	L	h				lbs.	kgs.
Cy 4 c	1/4	6	ASy 636 with MZ 7-2 ASz 636, ASk 636 DS 636, DSK 636 with MZ 7-31 and MZ 8-19	B 10	1 5/16	33	5/8	16	5 5/8	142	3 7/16	87	0,88	0,4
Cy 4 f	1/4	6		—	1 5/16	33	5/8	16,5	8	201	3	75	1,2	0,53
Cy 4 w	1/4	6		B 10	1 5/16	33	5/8	16	6 5/16	160	—	—	0,88	0,4
Cy 4 g ¹⁾	1/4	6		collet 6 mm	—	33	5/16	14	8	204	1 5/8	42	0,88	0,4
Cy 8 a	5/16	8	ASz 654-1 with MZ 7-4	B 12	2	50	3/4	20	7 1/16	180	3 1/16	78	2	0,9
Cy 8 b	5/16	8	ASz 654-1 with MZ 8-11/16	B 12	2	50	3/4	20	7 1/16	180	3 1/16	78	2	0,9
Cy 8 e	5/16	8	ASz 53 F with MZ 7-4	B 12	1 9/16	39,5	3/4	20	7 1/16	180	3 1/16	78	2	0,9
Cy 8 f	5/16	8	ASz 53 F with MZ 8-11/16	B 12	1 9/16	39,5	3/4	20	7 1/16	180	3 1/16	78	2	0,9
Cy 8 g	5/16	8	ASz 648 with MZ 7-4	B 12	1 3/4	43	3/4	20	7 1/16	180	3 1/16	78	2	0,9
Cy 8 h	5/16	8	ASz 648 with MZ 8-11/16	B 12	1 3/4	43	3/4	20	7 1/16	180	3 1/16	78	2	0,9
Cy 12	7/8	23	AB 120 b; ASk 658	morse taper	2	—	2	1 5/8	42	7 15/16	196	6 5/16	168	8,85
Cy 13	1 1/4	30	Ask 672, AB 140 a	3	3	2 1/16	52	9 7/16	239	7 3/16	187	17,6	8	—
Cy 14	2	50	AB 146 a	4	4	2 1/16	52	10 9/8	261	8 3/16	213	17,6	8	—

¹⁾ Spare collets 2-6 mm Ø: MZ 10-18 × Ø



Cy 8 a-h

ASc 636 □

Rotary Percussion Drills for drilling stone (Twist Drills: see page 6)

Type —/~		Capacity in stone		Speed R. P. M.	Input	Output	Net weight	
standard voltages	low tension 42 Volts	in.	mm				lbs.	kgs.
One speed drill:				percussions per min.	full load	no load		
ASc 636 □	ASc 736	3/8	10	11000	670	1300	230	115
Two speed drills:								
DSc 636 □	DSc 736	3/8	10	13000	820	1400	230	115
for A.C. only:				19000	1600	2700		
DSc 648 □	DSc 748	1 3/16	30	6000	370	600	500	300
				14500	900	1400	9,1	4,1

Machines equipped with chuck, 10 ft. (3 m) cable, type DSc 648 with second handle MZ 19-32.

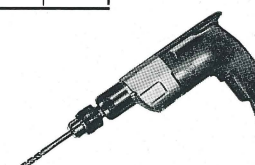
Prolongation for second handle (5 1/2", 140 mm): MZ 19-34

Carrying case for DSc 648: MZ 38-34

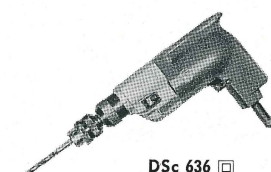
Handle for ASc 636, DSc 636: T 5-22-1

Carrying case for ASc 636, DSc 636: MZ 38-40

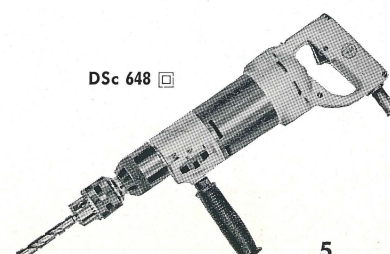
Greaser for ASc 636, DSc 636, DSc 648: MZ 32-13



DSc 636 □



DSc 648 □



Percussion Twist Drills tungsten carbide tipped



Order Reference	Diameter apprx.		Length	
	in.	mm	in.	mm
Bol 2-3	1/8	3	2 1/2	63
Bol 2-3,5	9/64	3,5	2 3/4	70
Bol 2-4	5/32	4	2 3/4	70
Bol 2-4,5	3/16	4,5	2 3/4	70
Bol 2-4,7	3/16	4,7	3 1/8	80
Bol 2-5	13/64	5	3 1/8	80
Bol 2-5,5	7/32	5,5	3 1/8	80
Bol 2-5,8	7/32	5,8	4	100
Bol 2-6	15/64	6	4	100
Bol 2-6,5	1/4	6,5	4	100
Bol 2-6,8	17/64	6,8	4	100
Bol 2-7	7/32	7	4	100
Bol 2-7,5	19/64	7,5	4	100
Bol 2-8	5/16	8	4 3/8	112
Bol 2-8,5	21/64	8,5	4 3/8	112
Bol 2-8,8	11/32	8,8	5	125

Order Reference	Diameter apprx.		Length	
	in.	mm	in.	mm
Bol 2-9	23/64	9	5	125
Bol 2-9,5	3/8	9,5	5	125
Bol 2-10	13/32	10	5	125
Bol 2-10,5	27/64	10,5	5	125
Bol 2-10,8	27/64	10,8	5	125
Bol 2-11	7/16	11	5 1/2	140
Bol 2-12	31/64	12	5 1/2	140
Bol 2-13	33/64	13	5 1/2	140
Bol 2-14	9/16	14	5 1/2	140
Bol 2-15	19/32	15	5 1/2	165
Bol 2-16	5/8	16	5 1/2	165
Bol 2-17	43/64	17	6 3/8	165
Bol 2-18	23/32	18	6 3/8	165
Bol 2-19	3/4	19	6 3/8	165
Bol 2-20	51/64	20	6 3/8	165

Percussion Twist Drills tungsten carbide tipped for deep holes



Bol 2-8	5/16	8	13 3/4	350
Bol 2-10	13/32	10	13 3/4	350
Bol 2-12	31/64	12	13 3/4	350

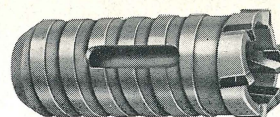
Bol 2-14	9/16	14	13 3/4	350
Bol 2-16	5/8	16	13 3/4	350
Bol 2-18	23/32	18	13 3/4	350

Shanks for Cutters



Order Reference	L		d (DIN)	suitable for	Net Weight		Order Reference	L		d (DIN)	suitable for	Net weight	
	in.	mm			lbs.	kgs.		in.	mm			lbs.	kgs.
Z 40-10x 80	3 1/8	80	M 12	Bol 2-20	0,154	0,07	Z 40-11x 80	3 1/8	80	M 16	Bol 2-25	0,374	0,17
Z 40-10x200	8	200	M 12	Bol 2-20	0,352	0,18	Z 40-11x200	8	200	M 16	Bol 2-30	0,704	0,32
Z 40-10x350	14	350	M 12	Bol 2-20	0,66	0,30	Z 40-11x350	14	350	M 16	Bol 2-40	1,298	0,59
							Z 40-11x550	22	550	M 16	Bol 2-80	1,914	0,87
											Bol 2-90		

Hard Metal Cutters



Order Reference	D		d fixing thread	Net weight	
	in.	mm		lbs.	kgs.
Bol 2-20	13/16	20	M 12	0,22	0,10
Bol 2-25	1	25	M 16	0,35	0,16
Bol 2-30	1/4	30	M 16	0,46	0,21
Bol 2-40	1 7/16	40	M 16	0,66	0,30

Cutters for wall sockets (for DSc 648):

Order Reference	D		d fixing thread	Net weight	
	in.	mm		lbs.	kgs.
Bol 2-66	2 5/8	66	M 16	1,14	0,51
Bol 2-80	3 1/3	80	M 16	1,40	0,63
Bol 2-90	3 5/8	90	M 16	1,66	0,75

Overhead Drilling Attachment for Percussion Drills

Working Height: up to 11.4 ft.
(3,5 m)

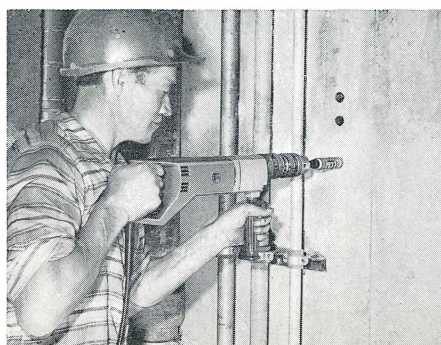
Prolongation: up to 16.4 ft.
(5 m)

Capacity (depth of bore):
10" (240 mm)

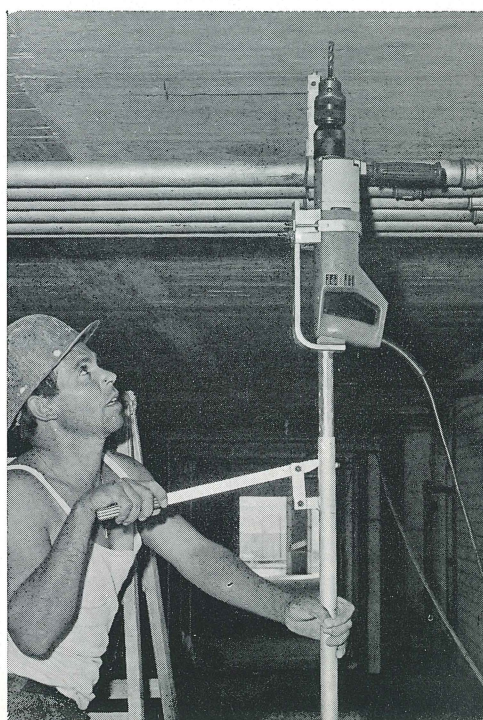
Order Reference: **Cd 350**
Net weight: 5,2 kg
Prolongation: T 16-18



DSc 636



DSc 648



Cd 350



Electric Tools

Accessories for Electric Drills

Order Reference	Capacity		D		d		Suitable for	Net weight	
	in.	mm	in.	mm	in.	taper		lbs.	kgs.

1. 3-jaw geared Chucks with forcing thread and key

MZ 7-2	1/4	6	1 3/16	30	0,3974	B 10	M 6	B 10	0,27	0,12
MZ 7-31	1/4	6	1 3/16	30	0,4750	B 12	M 6	B 12	0,31	0,14
MZ 7-29	5/16	8	1 3/8	35	0,3974	B 10	M 8	B 10	0,46	0,21
MZ 7-3	5/16	8	1 3/8	35	0,4750	B 12	M 8	B 12	0,44	0,20
MZ 7-28	3/8	10	1 1/2	38	0,4750	B 12	M 8	B 12	0,56	0,25
MZ 7-4	3/8	10	1 3/4	44	0,6194	B 16	M 10	B 16 or MT-Arbor	0,89	0,40
MZ 7-5	1/2	13	2 1/16	52	0,6194	B 16	M 12	B 16 or MT-Arbor	1,40	0,64
MZ 7-30	1/2	3-13	2 1/8	46	0,6194	B 16	M 10	B 16 or MT-Arbor	1,07	0,49
MZ 7-37	5/8	16	2 1/4	56	0,6194	B 16	1)	B 16 or MT-Arbor	1,84	0,84
MZ 7-6	5/8	16	2 1/4	56	0,7000	B 18	1)	only with MT-Arbor B 18	1,93	0,88
MZ 7-22	3/4	5-20	4	75	0,8579	B 22	1)	only with MT-Arbor B 22	4,31	1,96
MZ 7-34	3/8	10	1 1/2	38		1/2"x20 (UNF)	1)	percussion drills ASc 636 DSc 636	0,56	0,25
MZ 7-33	5/8	16	2 1/4	56		M 18	1)	percussion drills DSc 648	1,93	0,88
MZ 7-36	5/16	8	1 3/16	30		1/2"x20 (UNF)	1)	AHSy 3636, DHS 3636	0,31	0,14

1) without forcing thread

2. Spare Keys for chucks

	Dia of shank		Teeth			
	in.	mm				
MZ 57-1	5/32	4	10	MZ 7-2, MZ 7-31	0,04	0,02
MZ 57-2	1/4	6	12	MZ 7-3, MZ 7-4/28/29/34/30/35	0,05	0,025
MZ 57-4	5/16	8	12	MZ 7-5, MZ 7-6, MZ 7-33/37	0,15	0,07
MZ 57-5	3/8	9	14	MZ 7-22	0,29	0,13

3. Quick-action Chucks, flat, especially for drilling wood

MZ 8-14	1/4	6	1 1/4	31	0,3974	B 10	B 10	0,46	0,21
MZ 8-2	1/4	6	1 5/16	31	0,4750	B 12	B 12	0,46	0,21
MZ 8-3	3/8	10	1 1/2	40	0,6194	B 16	B 16	0,94	0,42
MZ 8-4	1/2	13	2 1/16	52	0,6194	B 16	MT-Arbor, MZ 11-6, 8	1,98	0,89
MZ 8-24	1/8-3/8	3-16	2 1/4	58	0,7000	B 16	MT-Arbor MZ 11-7, 10, 13	3	1,10

4. Quick-action Chucks pointed (type R)

MZ 8-15	1/4	6	1 3/8	32	0,3974	B 10	B 10	0,59	0,27
MZ 8-19	1/4	6	1 3/8	32	0,4750	B 12	B 12	0,57	0,26
MZ 8-20	5/16	8	1 3/8	35	0,4750	B 12	B 12	0,79	0,36
MZ 8-21	3/8	10	1 3/8	35	0,4750	B 12	B 12	1,25	0,57
MZ 8-16	3/8	10	1 3/4	40	0,6194	B 16	B 16	1,25	0,57
MZ 8-17	1/2	1-13	2	46	0,6194	B 16	MT-Arbor, MZ 11-6, 8	1,80	0,82
MZ 8-25	5/8	3-16	2	51	0,6194	B 16	MT-Arbor MZ 11-7, 10, 13	2,50	1,05
MZ 8-18	5/8	3-16	2	51	0,7000	B 18		2,42	1,10

4. Quick-action Chucks pointed (type A)

MZ 8-8	1/4	6,5	1 3/8	34	0,3974	B 10	B 10	0,66	0,30
MZ 8-9	1/4	6,5	1 3/8	34	0,4750	B 12	B 12	0,66	0,30
MZ 8-10	5/16	8	1 1/2	38	0,4750	B 12	B 12	0,92	0,42
MZ 8-11	3/8	10	1 11/16	43	0,6194	B 16	B 16	1,36	0,62
MZ 8-12	1/2	13	2	50	0,6194	B 16	B 16	2,11	0,96
MZ 8-26	5/8	3-16	2 1/4	56	0,6194	B 16	MT-Arbor, MZ 11-6, 8	2,75	1,25

5. Morse Taper Arbors

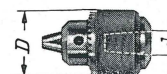
Morse Taper						
MZ 11-6	1	0,6194	B 16	for chucks with taper	d = B 16	0,22
MZ 11-7	1	0,7000	B 18		d = B 18	0,26
MZ 11-8	2	0,6194	B 16		d = B 16	0,29
MZ 11-10	2	0,7000	B 18		d = B 18	0,44
MZ 11-13	3	0,7000	B 18		d = B 18	0,55
MZ 11-11	2		B 22		d = B 22	0,7
MZ 11-14	3					0,89
MZ 11-16	4					1,11

6. Morse Taper Reducing Sleeves

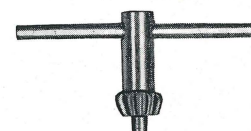
MZ 12-2	MT 2 at MT 1	for drills with MT socket No.	2	0,22	0,10
MZ 12-3	MT 3 at MT 2		3	0,4	0,18
MZ 12-4	MT 4 at MT 3		4	0,77	0,35
MZ 12-5	MT 5 at MT 4		5	2,1	0,95

7. Enlargement Tapers

MZ 14-3	MT 2 at MT 3	MT 2	1,22	0,55
MZ 14-4	MT 3 at MT 4	MT 3	3,1	1,4
MZ 14-5	B 16 at MT 1	B 16	4,5	0,2
MZ 14-6	B 16 at MT 2	B 16	0,64	0,29



1



2



3



4



5



6



7

Accessories for Drills

Tappers Screwdrivers

Impact Wrenches

Tool Post Grinders

Contact Belt Grinders Balancers

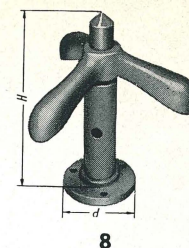
Angle Grinders

Shears Nibblers Hack Saws

Plug Connections Transformers

8. Feed Screws

Order Reference	d in. mm	H min.		H max.		for Drills	Net weight		
		in.	mm	in.	mm		lbs.	kgs.	
MZ 33-12-1	1 ⁷ / ₁₆	40	4	100	5 ¹¹ / ₁₆	145	ASzx 654-1, Cy 8	0,88	0,4
MZ 33-3-1	1 ³ / ₄	45	4	100	4 ¹¹ / ₁₆	144	DSk 658	0,88	0,4
MZ 33-16-2	2 ⁷ / ₁₆	65	7	174	9 ¹¹ / ₁₆	246	{ ASk 672, DSk 672 ÷ DDSk 111 AB 120b-146a, BQ 120 ÷ BQ 146	2,64	1,2



8

9. Drifts

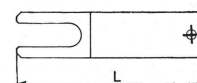
	L in. mm	for Drills with taper				
		in.	mm			
MZ 17-3	5 ¹ / ₂	140	MT 1 and MT 2	1,54	0,07	
MZ 17-4	7 ¹ / ₂	190	MT 3	0,37	0,165	
MZ 17-5	7 ¹ / ₈	180	MT 4	1,45	0,65	



9

10. Drifts for chucks

MZ 17-9	4 ¹ / ₈	105	chucks up to B 12	0,22	0,1	
MZ 17-10	5	125	chucks up to B 16	0,4	0,18	

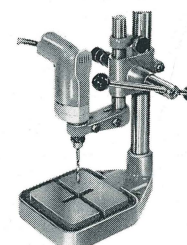


10

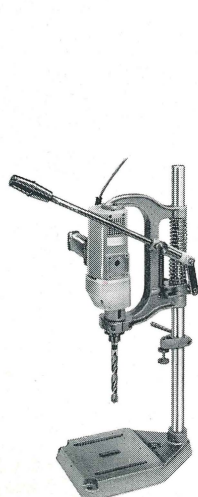
Bench Drill Stands

Type	suitable for types	Net weight		
		lbs.	kgs.	
CI 6-1 a*)	ASy 636, ASz 636, DS 636	31	14	
CI 6-1 c	ASk 636, DSk 636, ASg 636	31	14	
CI 10-1 q	ASk 654-1	35	16	
CI 10-1 v	ASz 648, DS 648	40	18	
CI 10-1 w	ASg 648	40	18	
CI 10-1 t	ASk 658	40	18	
CI 10-1 s	DSk 658	40	18	
CI 10-1 u	ASq 658	40	18	
CI 10-1 x	ASg 658	40	18	
CI 12 b	AB 120 b	73	33	
CI 12 f	ASk 672, DSk 672, DDSk 672, DDSk 111 . .	80	36	
CIp 12	AB 140 a	94	42	
with all bench drill stands a machine vice MZ 50-3 can be supplied (width of jaws: 85 mm, 3 ³ / ₈ ", capacity: 70 mm, 2 ³ / ₄ ") clamping parts for MZ 50-3: SR 24-20-1		8,4	3,8	

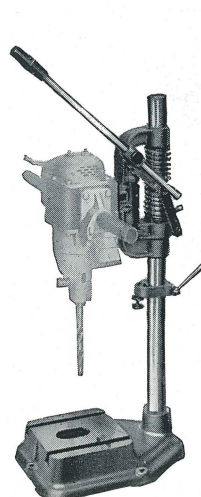
*) use only with chucks up to max. 32 mm ϕ (Dim. „D“)



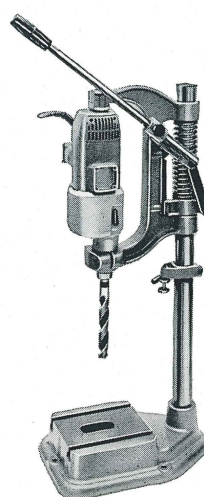
CI 6-1



CI 10-1 s



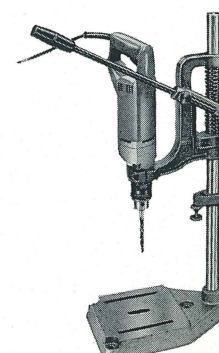
CI 12 b



CI 12 f



machine vice
MZ 50-3



CI 10-1 v



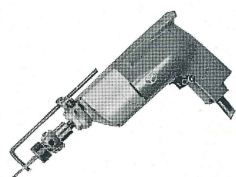
Electric Tools

Type of Current

- D.C. only
- ~ single-ph.A.C.
- /~ D.C.single-ph.A.C. (universal motor)
- 3 ~ Three-phase A.C.
- double insulated and radio suppressed

Do not forget when ordering or inquiring to state
THE TYPE OF CURRENT, VOLTAGE AND FREQUENCY

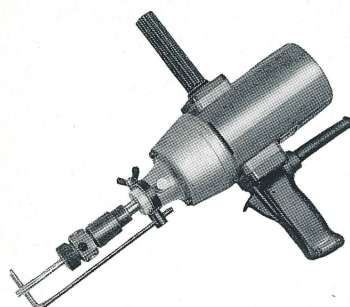
Tappers



ASg 636 □



ASg 648 □



ASg 658 □

Type		for tapping in steel up to		Speed of tap		Input	Output	Tapered Spindle	Net weight	
standard voltages	low tension 42 Volts	in.		cutting	running back	in Watts			lbs.	kgs.
ASg 636 □	ASg 736	1/4	M 6	450	580	230	115	B 12	3,6	1,6
ASg 648 □	ASg 748	3/8	M 10	240	550	500	300	B 16	8	3,6
ASg 658 □	ASg 758	5/8	M 16	150	330	540	320	B 16	11,4	5,1

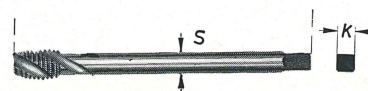
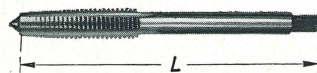
Machines equipped with 10 ft. (3 m) cable, chuck and key. Type ASg 648 with second handle MZ 19-32.

Accessories on demand

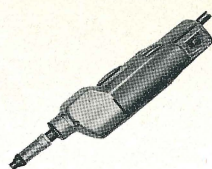
for type	ASg 636	ASg 648	ASg 658
Spare Chucks	MZ 9-19	MZ 9-18	MZ 9-17
Floating Chucks	MZ 9-41	MZ 9-40	MZ 9-39
Spare Key for Chucks	Z 10-10	Z 10-17	Z 10-17
Depth Stops (for blind holes)	MZ 27-5-2	MZ 27-3-3	MZ 27-3-3
Suspension		MZ 26-27	MZ 26-24-1

Taps (Taps with English Standard Thread on demand)

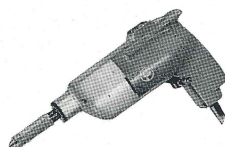
Order Reference	L		S		K		Net weight	
	in. approx.	mm	in. approx.	mm	in. approx.	mm	lbs.	kgs.
a) With straight flutes for straight-through holes								
Z 73 a - M 3	2 3/16	56	1/8	3,5	7/64	2,7	0,009	0,004
Z 73 a - M 4	2 1/2	63	3/16	4,5	9/64	3,4	0,013	0,006
Z 73 a - M 5	2 3/4	70	1/4	6	3/16	4,9	0,022	0,010
Z 73 a - M 6	3 1/8	80	1/4	6	3/16	4,9	0,033	0,015
Z 73 a - M 8	3 1/2	90	1/4	6	3/16	4,9	0,044	0,020
Z 73 a - M 10	4	100	5/16	7	7/32	5,5	0,073	0,033
Z 73 a - M 12	4 5/16	110	3/8	9	9/32	7	0,12	0,054
Z 73 a - M 14	4 3/16	110	7/16	11	3/8	9	0,154	0,070
Z 73 a - M 16	4 5/16	110	13/32	12	3/8	9	0,187	0,085
b) With right-hand spiral flute for blind holes with short thread run out								
Z 73 c - M 3	2 3/16	56	1/8	3,5	7/64	2,7	0,006	0,003
Z 73 c - M 4	2 1/2	63	3/16	4,5	9/64	3,4	0,013	0,006
Z 73 c - M 5	2 3/4	70	1/4	6	3/16	4,9	0,026	0,012
Z 73 c - M 6	2 1/8	80	1/4	6	3/16	4,9	0,033	0,015
Z 73 c - M 8	3 1/2	90	1/4	6	3/16	4,9	0,044	0,020
Z 73 c - M 10	4	100	5/16	7	7/32	5,5	0,066	0,030
Z 73 c - M 12	4 5/16	110	3/8	9	9/32	7	0,114	0,053



Screwdrivers with reversing switch for clockwise and anticlockwise rotation



ASsl 636 □



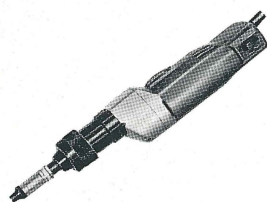
ASs 636 □



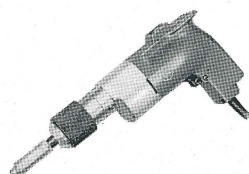
ASs 648 □



ASsd 715



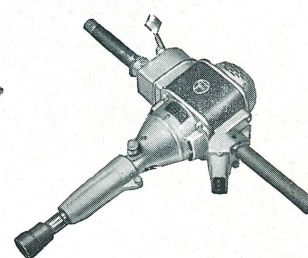
ASsld 636-1 □



ASsd 636-1 □



ASsd 648 □



ABs 120

Type		for				Speed R. P. M.		Input	Output	Net weight	
standard voltages	low tension 42 Volts	screws				full load	no load	in Watts		lbs.	kgs.
		in.	mm	in.	mm						
a) Screwdrivers with positive clutch											
~	~										
ASsl 636 □	ASsl 736	1/4	6	1/4	6	450	800	180	90	3,52	1,6
ASs 636 □	ASs 736	1/4	6	1/4	6	450	800	180	90	3,52	1,6
*ASs 636 b □	ASs 736 b	3/16	4,8	—	—	1900	3000	180	90	3,52	1,6
ASs 648 □	ASs 748	3/8	10	5/16	8	250	600	400	220	7,48	3,4
*ASs 648 d □	ASs 748 d	1/4	6,3	—	—	950	2270	400	220	7,48	3,4
b) Screwdrivers with adjustable double clutch											
~	~										
—	ASsd 715	3/16	4	—	—	1000	1400	40	—	1,80	0,82
ASsld 636-1 □	ASsld 736-1	1/4	4	—	—	450	800	180	90	4,62	2,1
ASsd 636-1 □	ASsd 736-1	1/4	6	—	—	450	800	180	90	5,06	2,3
ASsd 648 □	ASsd 748	3/8	10	5/16	8	420	1000	400	220	8,8	4,0
3 ~	3 ~										
ABs 120	ABs 120 K	3/8	16	—	—	200	—	720	500	35	16

All machines equipped with 10 ft. (3 m) cable, Types ASs 648 and ASsd 648 with second handle MZ 19-32. Prices include 1 screw driver bit.

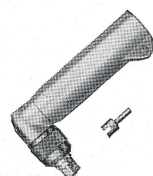
ASs 636, ASsd 636-1 on request with Suspension Device GH 1-20-1

* Screwdriver for self-drilling and -tapping screws

Accessories

Description	suitable for	Order Reference
Suspension Device Balancer up to 5,1 lbs. (2,5 kg) up to 7,7 lbs. (3,5 kg) up to 16,5 lbs. (7,5 kg)	ASs 648, ASsd 648	MZ 26-27 MZ 26-15a MZ 26-15 MZ 26-16
Carrying Case	ASs 636, ASsd 636-1 ASsd 648	MZ 38-40 MZ 38-34

Right Angle Screwdriver Attachments



Cys 4 d, Cs 1

Type	for type	for screws up to	Square Drive	Height		Total length		Net weight		Distance Spindle/edge	
				in.	mm	in.	mm	lbs.	kgs.	in.	mm
Cys 4 d ¹⁾	ASz 636, ASk 636 DS 636, DSk 636	M 6 (1/4")	1/2"	3 5/16	84	6 5/10	160	1,22	0,545	11/16	17
Cs 1	ASsd 648	M 10 (3/8")	1/2"	3	75	7	177,5	2,2	1,0	1	25

¹⁾ Only use with chuck MZ 7-31 or MZ 8-19



Electric Tools

Type of Current

- D.C. only
- ~ single-ph.A.C
- /~ D.C./single-ph.A.C. (universal motor)
- 3 ~ Three-phase A.C.
- double insulated and radio suppressed

Do not forget when ordering or inquiring to state
THE TYPE OF CURRENT, VOLTAGE AND FREQUENCY

Impact Wrenches

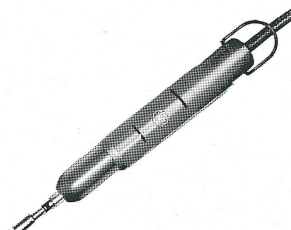
Type		For Screws up to		Square Drive in.	Speed R. P. M.		Taps p. M.	Input in Watts	Output in Watts	Net weight	
standard voltages	low tension 42 Volts	standard	high tensile		load	no load				lbs.	kgs.
~	~										
ASb 636 □	ASb 715	M 6 (1/4")	—	*	850	1400	2000	40	—	2,1	0,96
ASb 346-1	ASb 736	M 16 (5/8")	M 12 (1/2")	1/2"	850	1350	1700	200	100	5,1	2,3
	ASb 346-1 K	M 18 (3/4")	M 14 (9/16")	1/2"		1500	1700	280	140	7,3	3,3
—/~	—/~										
ASb 53-2	ASb 53-2 K	M 22 (7/8")	M 18 (3/4")	3/4"	750	1400	1500	480	280	11,0	5,0
ASb 658 □	ASb 758	M 24 (1")	M 20 (3/4")	1"	640	1400	1280	450	250	15,0	6,8
3 ~	3 ~										
ASb 110	ASb 110 K	M 30 (1 1/16")	M 22 (7/8")	1"	780	—	1560	1100	740	27,5	12,5

ASb 636 on demand with suspension bow
Machines equipped with 16 ft. (5 m) cable (ASb 715, ASb 636 with 10 ft. (3 m) cable) and tool for
* Round receiver for tools
with 7 mm shank dia.

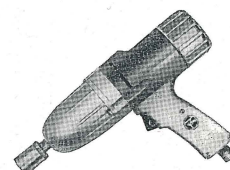
slotted head screws: Z 81-8x1.2 for ASb 715
hexagon screws: Z 85c-17 (M 10) for ASb 636
Z 85cv-19 (M 12) for ASb 346-1
Z 85e-19 (M 12) for ASb 53-2
Z 85f-27 (M 18) for ASb 658, ASb 110

Accessories

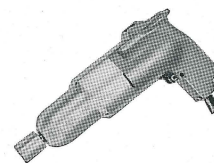
Description	suitable for	Order Reference	
Suspension Attachments	ASb 636	vertical	horizontal
	ASb 346-1	GH 1-20-1	—
	ASb 53-2	MZ 26-12-1	MZ 26-11-1
	ASb 658	MZ 26-13-1	MZ 26-10-1
	ASb 110	MZ 26-24-1	MZ 26-25
		MZ 26-14-2	—
Carrying Cases	ASb 636 ASb 346-1 ASb 53-2	MZ 38-40 MZ 38-37 MZ 38-38	
Step-down Transformers to limit the torque	ASb 636, ASb 346-1, ASb 53-2 ASb 658	EZ 47-11 (120-220 V or 60-110 V) EZ 47-13 (100-220 V or 50-110 V)	
Protection rings for motor housing	ASb 346-1 ASb 53-2	JS 19-17 JS 19-16	
Balancers: see page 16			



ASb 715
42-Volt



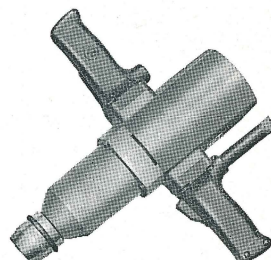
ASb 346-1



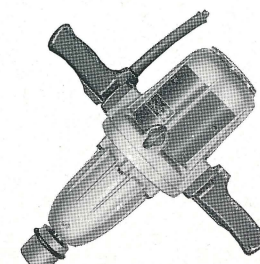
ASb 636 □



ASb 53-2



ASb 658 □



ASb 110

Impact
Wrenches

Tool Post
Grinders

Contact Belt
Grinders
Balancer

Angle
Grinders

Shears
Nibblers
Hack Saws

Plug Connections
Transformers

A full range of bits, sockets, inserts etc. is available for our screw drivers and impact wrenches. Impact wrench tools are made of high-grade chrome-vanadium alloy steel, and are far less susceptible than ordinary tools to the high torque loads transmitted from the percussion mechanism.

The following tools are itemised in our List Zs under the Item Nos. given below:

For Model	Item No.	for	Order Reference
ASsd 715	1	Shafts for hexagon inserts	Z 79 - 3 × 57, × 132
	2	Slotted screws	Z 80 - blade width × thickness
	3	Centering sleeves for 2	Z 80k - 1, - 2
	4	Phillips screws	Z 80i - 1,5, - 2
	5	Socket head screws, hexagon	Z 77 - W.A.F.
	6	Hexagon	Z 78 - W.A.F.
	7	Double square	
ASs, ASsl 636, ASsd, ASslid 636-1, ASB 715	10	Slotted screws	Z 81 - blade width × thickness
	11	Centering sleeves for 10	
	16	Shanks (item 35, 39), 2" (50 mm) and 4" (100 mm) long	Z 84a - 7 × length
	12	Socket-head screws	Z 81i - W.A.F.
	13	Phillips screws	Z 81k - Slot No.
	35	Hexagon, 1" (25,4 mm) long	Z 85a - W.A.F.
	39	Double square (1/4" square drive)	Z 86a - W.A.F.
ASs 648, ASsd 648	17	Slotted screws, without centering sleeve	Z 82 - blade width × thickness F
	24	Shanks (item 35, 37, 39) 3/8" square drive, 2, 3, 5, 8" (40, 70, 125, 200 mm) long 1/2" square, 2, 3, 5, 8, 12, 16" (50, 70, 125, 200, 300, 400 mm) long	Z 84b - 11 × length Z 84c - 11 × length
	23	Socket head screws, hexagon	Z 82i - W.A.F.
	24	Phillips screws	Z 82k - Slot No.
	29	Studs, M 6, M 8, M 10, M 12, M 14	Z 56-1-1 to Z 56-5-1
	35	Hexagon (3/8" square mounting socket) 7/8" (22 mm) long	Z 85b - W.A.F.
	35	Hexagon (1/2" square mounting socket) 1 1/2" (38 mm) long	Z 85c - W.A.F.
	37	Hexagon (1/2" square mounting socket) 3 1/4" (82 mm) long	Z 85cl - W.A.F.
	39	Double square (3/8" square drive)	Z 86b - W.A.F.
	39	Double square (1/2" square drive)	Z 86c - W.A.F.
ABs 120	34	Shanks (item 35, 37, 39) 3, 5, 8, 12, 18" (70, 125, 200, 300, 450 mm) long	Z 84c - 17 × length
	27	Slotted screws, without centering sleeve, blade width 9/16, 5/8, 3/4" (14, 16, 20 mm)	Z 2-11, 12, 14
	29	Studs M 8, M 10, M 12, M 16, M 18	Z 56-11-1 up to Z 56-16-1
	35	Hexagon, 1 1/2" (38 mm) long	Z 85c - W.A.F.
	37	Hexagon, 3 1/4" (82 mm) long	Z 85cl - W.A.F.
	39	Double square } 1/2" square drive	Z 86c - W.A.F.
ASB 636, ASB 346-1	35	Hexagon, 1 1/2" (38 mm) long	Z 85c - W.A.F.
	37	Hexagon, 3 1/4" (82 mm) long	Z 85cl - W.A.F.
	39	Double square	Z 86c - W.A.F.
	45	Extensions, 3, 5, 10" (75, 125, 250 mm) long	Z 91c - length
	29	Studs	Z 89c - 4 - thread
	48	Phillips, No 5-7 and 8-10	Z 87c - 8 - 3k - 4k
	50	Joint	Z 89c - 2
	46	Socket head, hexagon	Z 87c - 9 - W.A.F. i
ASB 53-2	36	Hexagon, 2" (51 mm) long	Z 85e - W.A.F.
	38	Hexagon, 4" (101 mm) long	Z 85el - W.A.F.
	40	Double square, 2" (51 mm) long	Z 86e - W.A.F.
	41	Double square, 4" (101 mm) long	Z 86el - W.A.F.
	29	Studs	Z 89e - 4 - thread
	50	Joint	Z 89e - 2
	46	Socket head, hexagon	Z 87e - 11 - W.A.F. i
ASB 658, ASB 110	45	Extensions, 7, 10, 12" (175, 250, 330 mm) long	Z 91e - length
	36	Hexagon, 2" (54 mm) long	Z 85f - W.A.F.
	38	Hexagon, 4" (108 mm) long	Z 85fl - W.A.F.
	40	Double square, 2" (54 mm) long	Z 86f - W.A.F.
	41	Double square, 4" (108 mm) long	Z 86fl - W.A.F.
	29	Studs	Z 89f - 4 - thread
	50	Joint	Z 89f - 2
	46	Socket head, hexagon	Z 87f - 10 - W.A.F. i
	45	Extensions, 7, 10, 12" (175, 250, 330 mm) long	Z 91f - length

For full details, please consult our leaflets Zs 1, 2, 3



Electric Tools

Type of Current

- D.C. only
- ~ single-ph.A.C.
- /~ D.C./single-ph.A.C. (universal motor)
- 3 ~ Three-phase A.C.
- double insulated and radio suppressed

Do not forget when ordering or inquiring to state
THE TYPE OF CURRENT, VOLTAGE AND FREQUENCY

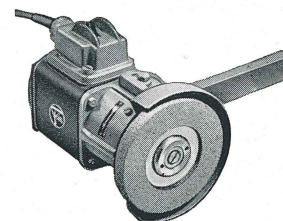
Tool Post Grinders

Type		No-load Speed	Input	Output	Net weight		Grinding Wheels						
							dia. mm	face mm	hole mm	Recess depth \varnothing /mm	Net weight		Order Reference
standard voltages	low tension 42 Volts			in Watts	lbs.	kgs.					lbs.	kgs.	
3 ~ MBs 106 a-1 †)	3 ~ MBs 106a-1 K	3000	550	350	20,8	9,4	150	20	32	80/8	1,44	0,65	M 14-24
MBs 122	MBs 122 K	3000	720	500	38,5	17,4	200	25	32	110/10	3,3	1,5	M 14-25

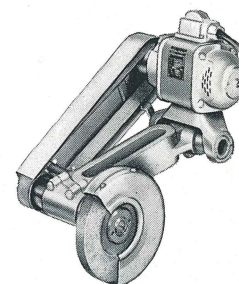
†) with reversing switch $\nabla \Delta$
All these types can be furnished with **stand for stationary use** instead of square shaft without price increase

Extension Spindles for internal grinding

			in. mm	in. mm	in. mm	lbs. kgs.	
M 6—23—2	for MBs 106a-1	0,55	0,25	2 50 $\frac{3}{8}$	10 $\frac{1}{2}$ 13 —	0 09 0,04	M 13-20
M 6—11—2	for MBs 122	1	0,45	3 75 $\frac{3}{8}$	10 $\frac{13}{16}$ 20 —	0,2 0,09	M 13-107



MBs 106 a-1



MB

Precision Lathe Grinders

for highest capacity and precision, suitable for external and internal grinding

Type		Quill- type	Speed of wheel	Input	Output	Net weight		Grinding Wheels								
standard voltages	low voltage 42 Volts					in Watts		lbs.	kgs.	dia mm	face mm	hole mm	Recess depth Ø/mm	Net weight		Order Reference
—/~ MB 406	—/~ MB 406 K	M 160	6800	350	180	20,5	9,3		100	16	20	—	0,66	0,3	M 13-34	
3 ~	3 ~															
MB 106-1 ¹⁾	MB 106-1 K	M 180 a	4400	550	350	35	15,8		150	20	32	80/8	1,44	0,65	M 14-24	
MB 120	MB 120 K	M 181 a	3200	720	500	62	28		200	25	32	110/10	3,3	1,5	M 14-25	
MB 120-1 ²⁾	MB 120-1 K	M 191-1	6500	720	500	70,5	32		100	25	32	63/9	1,1	0,5	M 14-30	
MN 1100	—	M 193	2700	2900	2200	172	78	} 250	40	51	150/16	8,2	3,7	M 14-29		
MN 1100a ³⁾	—	M 194-1	2700	2900	2200	184	83									

¹⁾ with reversing switch ∇ Δ

²⁾ Brake Drum Grinder

³⁾ Journal Grinder

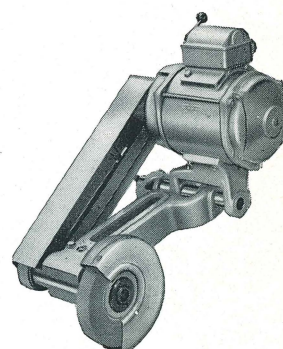
All machines normally equipped with 10 ft. (3 m) cable.
MN 1100, MN 1100 a not available for 42 Volts

Extension Spindles for internal grinding

Speeds when using pulleys specified below: from 7000 to 24 000 r.p.m.

Order Reference		L min.		T max.		Q		Net weight			Grinding Wheels					
		in.	mm	in.	mm	in.	mm	lbs.	kgs.		dia mm	face mm	hole mm	Net weight lbs. kgs.	Order Reference	
M 6-34-1	for MB 406	with collet (6 mm) ¹⁾				—	—	0,09	0,04		3)					
M 6-24-1		³ / ₄	20	1 ³ / ₈	35	¹ / ₄	6	0,09	0,04		13	5	4	0,01	0,005	M 13-104
M 6-25-1		¹³ / ₁₆	30	2	50	¹ / ₂	12	0,15	0,07		20	10	8	0,02	0,010	M 13-105
											25	10	8	0,02	0,010	M 13-106
M 6-27-1		2 ³ / ₈	60	2	50	³ / ₄	19	0,15	0,07		40	10	13	0,06	0,030	M 13-17
											45 ²⁾	10	13	0,09	0,040	M 15-1

¹⁾ spare collets: MZ 10-14 (6 mm) ²⁾ bakelite bond ³⁾ Grinding profiles see leaflet MSH



MN 1100

Tool Post Grinders

Contact Belt Grinders Balancers

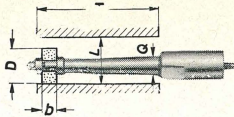
Angle Grinders

Shears Nibblers Hack Saws

Plug Connections Transformers

Extension Spindles for internal grinding

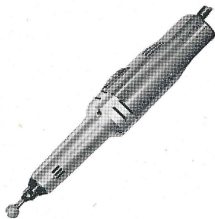
Speeds when using pulleys specified below: from 7000 to 24 000 r.p.m.



extension spindle for internal grinding



AHSI 636 □



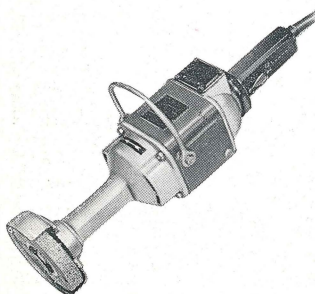
MSh 636 □



MSh 648 □



MShy 663 □



MBh 106-1

Order Reference		L min.		T max.		Q		Net weight		Grinding Wheels					
		in.	mm	in.	mm	in.	mm	lbs.	kgs.	dia. mm	face mm	hole mm	lbs.	kgs.	Order Reference
M 6-33-1	for MB 106-1	with collet (6mm) ¹⁾		—	—	—	—	0,44	0,2	3)					
M 6-23-1		1 3/16	30	3 1/2	90	9/16	14	0,44	0,2	20	10	8	0,02	0,010	M 13-105
M 6-32-1	for MB 120	with collet (6 mm) ¹⁾		—	—	—	—	0,44	0,2	3)					
M 6-26-1		1 3/16	30	3 1/2	90	9/16	14	0,66	0,3	20	10	8	0,02	0,010	M 13-105
M 6-11-1		2 3/8	60	4 3/8	110	3/4	19	0,88	0,4	32	10	13	0,04	0,020	M 13-13
M 6-13-1		2 3/8	60	5 1/8	130	2	26	1,1	0,5	40	10	13	0,06	0,030	M 13-17
										40	10	13	0,06	0,030	M 13-20
M 6-12-1	for MN 1100	2 3/8	60	4	100	3/4	19	1,1	0,5	32	10	13	0,04	0,020	M 13-13
										40	10	13	0,06	0,030	M 13-17

¹⁾ spare collets: MZ 10-14 (6 mm)

When using extension spindles, **smaller pulleys** are necessary:

³⁾ Grinding profiles see list MSh

for MB 406 (24 000 r.p.m.): MZ 1-70	0,26	0,12	for MB 106-1 (11 000 R.P.M.):	MZ 1-1	0,22	0,1
and MZ 1-3	0,11	0,05	for MB 120/120-1 (8800 R.P.M.):	MZ 1-5	0,22	0,1
Driving Belt MZ 4-3	—	—	for MN 1100 (7000 R.P.M.):	MZ 1-8	0,55	0,25

****)** Grinding wheels brand NK: for tough materials of high tensile strength, brand SC: for brittle materials of low tensile strength

Small Hand Grinders

Type ~ / ~			Speed R. P. M. no-load	Input Output		Net weight	
standard voltages	low tension 42 Volts			in Watts		lbs.	kgs.
AHSI 636 □	AHSI 736	with gear rim drill chuck 5/16" (8 mm)	1770	230	115	3,3	1,5
MSh 636 □	MSh 736	{ with collet 1/4" or 6 mm ϕ ¹⁾ grinding wheels max. 3/4" (20 mm) ϕ	28000	230	115	3,3	1,5
MSh 648 □	MSh 748	with collet 5/16" or 8 mm discs 30 m/s: max. 1" (25 mm) ϕ discs up to 45 m/s: max. 1 7/16" (36 mm) ϕ discs up to 80 m/s: max. 2 1/2" (63 mm) ϕ	23000	500	300	6,8	3,1

Machines equipped with 10 ft. (3 m) cable and 1 set of spanners

Accessories

Description	ϕ in. mm	Order Reference
Spare Collets for MSh 636 and MSh 648	— 3	MZ 10-87
	— 6	MZ 10-59
	— 8	MZ 10-69
	1/4 —	MZ 10-88
	1/8 —	MZ 10-89
Ceramic grinding wheel for MSh 636	13/16 20	Z 96-2
Ceramic grinding wheel for MSh 648	1 25	Z 96-3
Bakelite grinding wheel for MSh 648	1 7/16 36	M 15-30
Elastic wheel for MSh 648	2 1/2 63	M 28-24 SC 24 Qu Bf
Steel wire brush for AHSI 636	2 3/4 70	Z 19-22
Felt profile for AHSI 636	3 75	Z 19-21
Wheel arbor for M 28-24 and M 15-30	1/4 6	MZ 29-45-1
Wheel arbor for M 28-24 and M 15-30	5/16 8	MZ 29-29-1
Wheel arbor for used wheels	5/16 8	MZ 29-39-1
Support-Holder for MSh 636		MZ 1-10-1
Suspension device for MSh 648		MZ 26-27
Rotary Tools see leaflet MSh		

Hand Grinders (Straight Grinders)

Type		Speed R. P. M. no load	Input in Watts	Output in Watts	Net Weight		Grinding Wheels ³⁾				
standard voltages	low tension 42 Volts				lbs.	kgs.	dia. mm	face mm	hole mm	neth weight lbs. kgs.	Order Reference
~ / ~	~ / ~	7000	750	520	13	6	125	25/19	20	1,44 0,65	M 15-28 ¹⁾

¹⁾ Conical wheel, bakelite bond

Equipped with 16 ft. (5 m) cable

Balancers: see page 16



Electric Tools

Type of Current

- D.C. only
- ~ single-ph.A.C
- /~ D.C./single-ph.A.C. (universal motor)
- 3 ~ Three-phase A.C.
- double insulated and radio suppressed

Do not forget when ordering or inquiring to state
THE TYPE OF CURRENT, VOLTAGE AND FREQUENCY

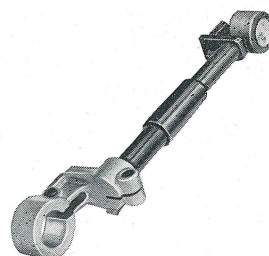
Small Contact Belt Grinders Type H B G

valuable and economical supplement for our electric grinders

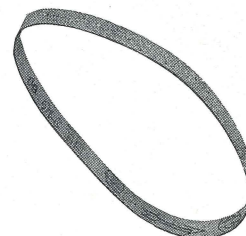
The use of this supplementary apparatus brings with it all the advantages connected with the use of a grinding belt. There are numerous applications nowadays in which the so-called contact or belt grinding method is given the preference over an emery wheel.

The emery wheel is replaced by the contact disc driving a grinding belt placed around it and guided over a pulley.

Set of HBG:



Grinding Arm






Grinding Belt



Contact Disc

Sets for our Grinders

consisting of contact disc and grinding arm

Set no.	Grinder type	motor output W	rev./min.	Contact Disc			Grinding Arm Order Reference	Grinding Belt Order Reference	Belt Speed		Weight per set		
				dia.		Order Reference			ft./s	m/s	lbs.	kgs.	
				in.	mm								
14	 MShy 663	520	7000	4	100	M 31-18	M 30-9	M 19-16	118	36,6	3,85	1,74	
20	 MB 406	180	6800	4	100	M 31-17	M 30-7	M 19-5	116	35,5	3,45	1,55	
21	 MB 106-1	350	4400	5 7/8	150	M 31-20	M 30-10	M 19-5	113	34,5	4,10	1,85	
22	MB 120-1/120	500	3200	8	200	M 31-22	M 30-11	M 19-17	110	33,5	7,32	3,33	

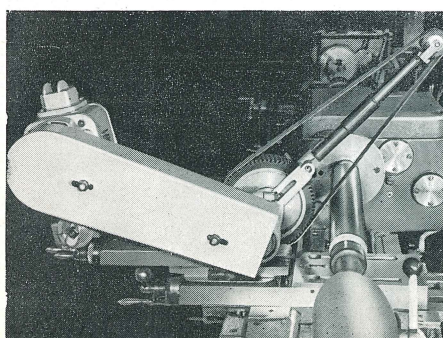
Linen Grinding Belts

Type NK (corundum), suitable for grinding tough materials of high tensile strength, such as steel, malleable iron, cast steel, malleable cast iron and bronze with grains 40 to 80, and for coarse-grinding aluminium, brass, copper, etc.

Order Reference	Dimensions length x width		for coarse grinding				Weight of 10 pcs	
	in.	mm	40	60	80	120-320	lbs.	kgs.
M 19-5	31 1/2 x 1 3/16	800 x 30					0,44	0,2
M 19-16	31 1/2 x 2	800 x 50					0,51	0,23
M 19-17	49 1/2 x 2	1250 x 50					0,89	0,4



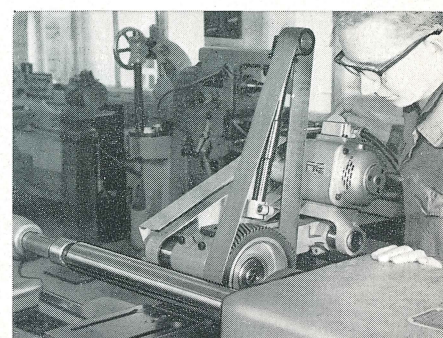
Contact grinding with hand grinder type MShy 663



Polishing a shaft with lathe grinder



Grinding cast iron with hand grinder



Grinding a shaft with lathe grinder

Contact Belt
Grinders
Balancer

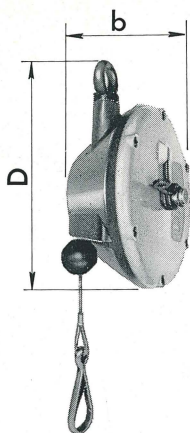
Angle
Grinders

Shears
Nibblers
Hack Saws

Plug Connections
Transformers



- Balancers (Spring Hangers with automatic stop devices)



MZ 26-15
MZ 26-16
MZ 26-17



MZ 26-22
MZ 26-23

The Fein-Balancers make electric and pneumatic power tools and all other portable hand tools weightless.

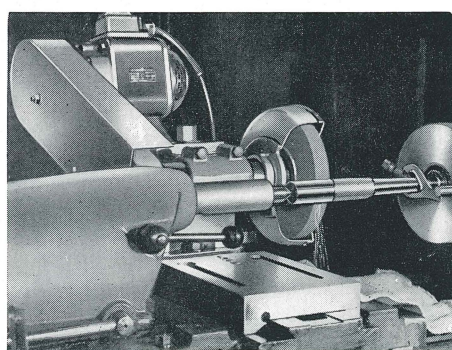
The Balancers in their robust casing ensure time-saving effortless working with all hand tools, plus easy manoeuvrability and complete freedom of movement.

Tools suspended from Balancers are safeguarded against damage from shock loads, impact and virtually all other causes.

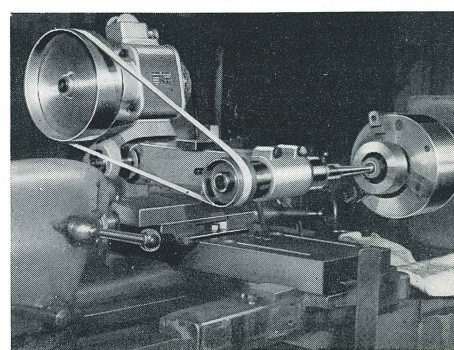
Inside the impact resistant housing of the Balancer, the swivel-mounted taper cable drum also serves as the spring casing. The plastic-sheathed steel cable runs in grooves on the outside of the taper drum. A safety pawl locks the drum against the housing in case of spring failure, so that the suspended tool cannot fall and sustain damage.

Technical Data and Prices

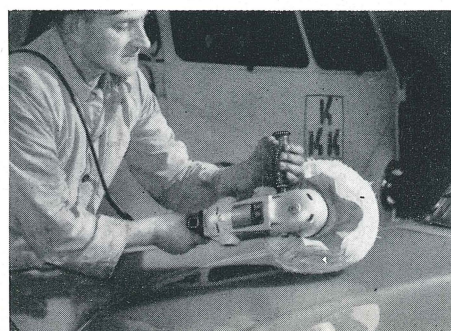
Type	Capacity	Cable Pay-out length		Dimensions				Weight		
		ft.	m	D		b		lbs.	kgs.	
MZ 26-15a	1,1 — 5,1 lbs. (0,5 — 2,5 kg)	6	1,8	8 1/2	215	4	100	4,4	2,0	
MZ 26-15	3,3 — 7,7 lbs. (1,5 — 3,5 kg)	6	1,8	8 1/2	215	4	100	3,5	1,6	
MZ 26-16	7,7 — 16,5 lbs. (3,5 — 7,5 kg)	6	1,8	8 1/2	215	4	100	3,5	1,6	
MZ 26-17	16,5 — 28,6 lbs. (7,5 — 13 kg)	6	1,8	8 1/2	215	4	100	3,5	1,6	
MZ 26-22	29 — 45 lbs. (13 — 25 kg)	6	2	11 1/4	285	5 1/8	130	15,5	7,0	
MZ 26-23	47 — 67 lbs. (22 — 32 kg)	6	2	11 1/4	285	5 1/8	130	15,5	7,0	



External grinding with Lathe Grinder



Internal grinding with Lathe Grinder



Polishing with Angle Grinder



Grinding stone with Angle Grinder



Electric Tools

Type of Current

- ⋮ D.C. only
- ~ single-ph.A.C.
- ⋮/~ D.C./single-ph.A.C. (universal motor)
- 3 ~ Three-phase A.C.
- double insulated and radio suppressed

Do not forget when ordering or inquiring to state
THE TYPE OF CURRENT, VOLTAGE AND FREQUENCY

Angle Grinders, normal voltage:

Type	Dia of Grinding wheel or Disc		Speed R.P.M. no load	Input Watts	Output HP	Fixing thread	Net weight		
	in.	mm					lbs.	kgs.	
MSf 656-1 ⋮/~ □	6 ³ / ₄	170	1800	480	0,36	M 14	7,8	3,5	
MSfv 656-1 ¹⁾ ~ □	5	125	12000	480	0,36	M 14	8,2	3,7	
MSf 63 a/14 ³⁾ ⋮/~	6 ³ / ₄	170	1700	750	0,7	M 14	12,1	5,5	
MSf 663 c ⋮/~ □	7	178	6800	750	0,7	M 14	13,2	6	
MSf 663 b ⋮/~ □	6 ³ / ₄	170	4900	750	0,7	M 14	12,1	5,5	
MSf 3675 d ⋮/~ □	7	178	8500	1400	1,25	M 14	11,9	5,4	
MSf 3675 c ⋮/~ □	9	230	6600	1400	1,25	M 14	11,9	5,4	
MSf 679 d ~ □	7	178	8500	2000	1,9	M 14	13,9	6,3	
MSf 679 c ~ □	9	230	6600	2000	1,9	M 14	13,9	6,3	
MSfa 679 d ~ □ ²⁾	7	178	8500	2000	1,9	M 14	13,9	6,3	
MSfa 679 c ~ □ ²⁾	9	230	6600	2000	1,9	M 14	13,9	6,3	
MSf 676 b ⋮/~ □	6 ³ / ₄ 8 ³ / ₄	170 220	4400	1300	1,25	M 14	14,2	6,4	

Angle Grinders for low voltage 42 V only:

MSf 756-1 ⋮/~	6 ³ / ₄	170	1800	480	0,36	M 14	7,7	3,5	
MSfv 756-1 ~	5	125	12000	480	0,36	M 14	8,2	3,7	
MSf 78 d K ⁴⁾ ~	7	178	8600	1500	1,3	M 14	16,0	7,2	
MSf 78 c K ⁴⁾ ~	9	230	6600	1500	1,3	M 14	16,0	7,2	

¹⁾ with protective motor plug, for A.C. only ²⁾ with peak current limitation, for 220 V only
³⁾ with water supply. For wet grinding recommended with isolating transformer
⁴⁾ transformer for MSf 78 ck, dk: EZ 47-21

Machines MSf 656-1, MSfv 656-1, equipped with 10 ft. (3 m) cable, all others with 16 ft. (5 m) cable, 1 set of wrenches, second handle (except MSfv 656-1), 1 tube of gear grease, 1 tube of grease for ball bearings, machines with more than 6000 R.P.M. with wheel guard and flanges

Accessories

	Description	suitable for	Order Reference	Diameter		Net weight	
				in.	mm	lbs.	kgs.
rough grinding	Flexible Grinding Wheels 6 mm for rough grinding 4 mm 6 mm 8 mm 6 mm	grinders with 6500 up to 12 000 r.p.m.	M 28-18	5	125	0,44	0,2
			M 28-8	7	178	0,53	0,24
			M 28-3	7	178	0,78	0,35
			M 28-14	7	178	1,0	0,45
			M 28-4	9	230	1,32	0,6
	Spare Flanges	flexible grinding wheels	M 8-65	1 ⁷ / ₈	48	0,12	0,056
			M 8-52	1 ⁷ / ₈	48	0,15	0,066

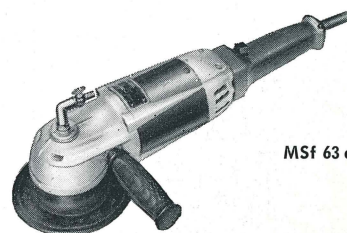
cutting off	Cutting Wheels	types MSf 78 K and MSf 679 with 6600 – 8600 r.p.m.	M 16-6 M 16-8	7 9 ¹ / ₄	178 235	0,31 0,56	0,14 0,25
	Inner Flange Outer Flange Rubber Disc	cutting wheel M 16-6	M 7-71 M 8-76 JS 16-31	2 ⁵ / ₁₆ 2 ⁵ / ₁₆ 2 ¹ / ₄	59 59 56	0,23 0,2 –	0,106 0,09 –
	Inner Flange Outer Flange Rubber Disc	cutting wheel M 16-8	M 7-69 M 8-73 JS 16-29	3 ¹ / ₈ 3 ¹ / ₈ 3	78 78 75	0,39 0,36 –	0,175 0,160 –
	Angle Piece	side handle MZ 19-32	SR 21-24-1	–	M 14	0,2	0,1
	Bench Stands	MSf 679 d, c, MSf 3675	Clm 1 d	–	–	26,7	12
	Wheel Guards with adjustable support	cutting wheel M 16-6 M 16-8	M 21-18-1	7 ⁵ / ₈	194	2,55	1,15
			M 21-19-1	9 ³ / ₄	249	3,6	1,6



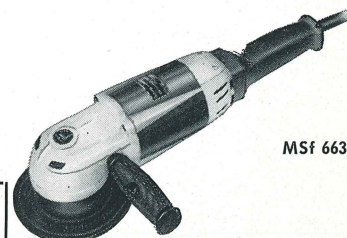
MSf 656-1 □



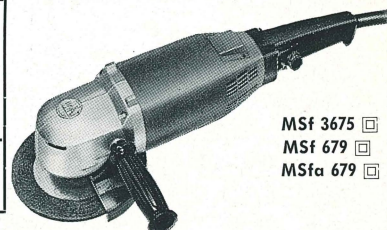
MSfv 656-1 □



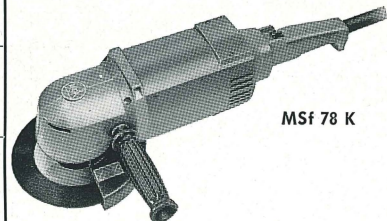
MSf 63 a/14



MSf 663 □



MSf 3675 □
MSf 679 □
MSfa 679 □



MSf 78 K

Angle Grinders

Shears
Nibblers
Hack Saws

Plug Connections
Transformers

Description	suitable for	Order Reference	Diameter		Net weight		
			in.	mm	lbs.	kgs.	
Elastic Discs	grinders with 1700 up to 8600 r.p.m.	MZ 53-43-1 MZ 53-34-1 MZ 53-35-1	5 ³ / ₄ 6 ³ / ₄ 8 ⁵ / ₈	145 170 220	0,66 0,6 1,1	0,3 0,27 0,5	
Abrasive Fibre Backed Discs	elastic disc MZ 53-43-1 MZ 53-34-1 MZ 53-35-1	M 25-24 M 25-13 M 25-15	6 6 ⁷ / ₈ 8 ⁷ / ₈	150 175 225	— — —	— — —	
Cup Wheels bakelite bond	grinders with 1700 up to 8600 r.p.m.	M 17-33 NK M 17-33 SC M 28-17	4 ³ / ₈ 4 ³ / ₈ 4 ³ / ₈	110 110 110	1,78 1,78 1,09	0,8 0,8 0,49	
Cup Wheel Guard	M 17-33, M 28-17-TW1	M 10-65-1	4 ³ / ₄	120	1,6	0,72	

sanding, cleaning, marbling	Twisted Steel Wire Brushes	grinders with 1700 up to 4400 (6600) r.p.m.	Z 19-6 Z 19-7	4 ³ / ₄ 6	120 150	1,42 3,1	0,64 1,4	
	Arbors	Z 19-6 Z 19-7	MZ 29-49-1 MZ 29-49-2	— —	— —	0,3 0,3	0,14 0,14	
	Steel Wire Brushes	grinders up to 4400 r.p.m.	Z 72-14 Z 72-15	4 ³ / ₄ 6	120 150	1,2 1,72	0,54 0,77	
	Arbor	Z 72-14 and Z 72-15	MZ 29-27-1	—	—	0,3	0,14	
	Cup Wire Brushes, twisted	grinders up to 6600 r.p.m.	Z 19-13 Z 19-14 Z 19-15	3 ³ / ₁₆ 4 4 ³ / ₄	80 100 120	1,44 1,66 2,06	0,65 0,75 0,93	
	Cup Wire Brush for marbling	grinders up to 1800 r.p.m.	Z 19-4	2 ³ / ₁₆	55	0,2	0,1	

grinding straight, polishing (with types MSF 656-1, MSF 63a/14)	Elastic Disc for Lambskin	Lambskin MZ 53-20 MZ 53-30 MZ 53-12	MZ 53-30 MZ 53-20 MZ 46-7	6 ⁷ / ₈ 9 ¹ / ₁₆ 6 ³ / ₄	175 230 170	0,78 0,11 0,05	0,35 0,05 0,02	
	Moss Rubber Pads	Artifex Discs M 22-8 Artifex Discs M 22-9, MZ 46-7	MZ 53-11 MZ 53-12	3 ³ / ₁₆ 4 ³ / ₄	80 120	0,26 0,35	0,12 0,16	
	Artifex Discs (grain 80-250)	MZ 53-11 MZ 53-12	M 22-8 M 22-9	3 ³ / ₁₆ 4 ³ / ₄	80 120	— —	— —	
	Water-resistant abrasive Papers Grain 60-400	MZ 53-11 MZ 53-12	M 25-11 M 25-12	3 ³ / ₁₆ 4 ³ / ₄	80 120	— —	— —	
	Sponge Rubber Pads for dry grinding	M 25-9, MZ 22-11 M 25-10, MZ 22-12	MZ 53-26 MZ 53-27	3 ³ / ₁₆ 4 ³ / ₄	80 120	0,26 0,35	0,12 0,16	
	Abrasive Papers for dry grinding (grain 40-360)	MZ 53-26 MZ 53-27	M 25-9 M 25-10	3 ³ / ₁₆ 4 ³ / ₄	80 120	— —	— —	
	Felt Discs	MZ 53-11, MZ 53-26 MZ 53-12, MZ 53-27	M 22-11 M 22-12	3 ³ / ₁₆ 4 ³ / ₄	80 120	0,06 0,13	0,03 0,06	
	Glue Thinner for Glue Polishing Paste Polishing Fluid	MZ 53-11, 12, MZ 53-26, 27	F 19-57 F 19-58 F 19-59 F 19-60	— — — —	— — — —	1,38 0,6 2,2 1,1	0,62 0,3 1,0 0,5	
	Felt Plates		M 22-13 M 22-14	4 ¹⁵ / ₁₆ 6 ⁷ / ₈	125 175	0,89 1,1	0,4 0,5	
	Molton Buffers		MZ 53-18 MZ 53-19	4 ¹⁵ / ₁₆ 6 ⁷ / ₈	125 175	1,0 1,3	0,45 0,6	
	Nettle Cloth Buffer Flannel Buffer Flange	MZ 53-28, MZ 53-29	MZ 53-28 MZ 53-29 MZ 29-30-1	9 ⁷ / ₈ 9 ⁷ / ₈ —	250 250 —	1,6 1,6 0,38	0,72 0,72 0,17	
	Polishing Sponge Flange	MZ 53-44 MSFv 656-1, 756-1	MZ 53-44 M 23-2	6 ⁵ / ₁₆ 4 ³ / ₈	160 110	0,11 0,44	0,05 0,2	
	Angle Piece	second handle MZ 19-32	SR 21-24-1	thread M 14		0,2	0,1	

Spare Accessories

Wheel Guards	grinders MSFv 656-1, 756-1 grinding { wheels { (150 mm) ϕ (178 mm) ϕ (235 mm) ϕ	M 10-79 M 10-69-1 M 10-70-1 M 10-71-1	5 ³ / ₁₆ 6 ⁷ / ₁₆ 7 ⁵ / ₈ 9 ¹³ / ₁₆	132 166 194 249	0,3 1,1 1,1 2,0	0,14 0,5 0,5 0,9	
Side Handle	all types	MZ 19-32	—	—	0,49	0,22	
Gear Grease (tube)	all types	MZ 60-3/FG 9	—	—	0,2	0,09	
Grease for ball bearings		MZ 60-1/FK 3	—	—	0,02	0,01	



Electric Tools

Type of Current

- D.C. only
- ~ single-ph.A.C.
- /~ D.C./single-ph.A.C. (universal motor)
- 3 ~ Three-phase A.C.
- double insulated and radio suppressed

Do not forget when ordering or inquiring to state
THE TYPE OF CURRENT, VOLTAGE AND FREQUENCY

Angle Grinders for stone grinding (with water supply)

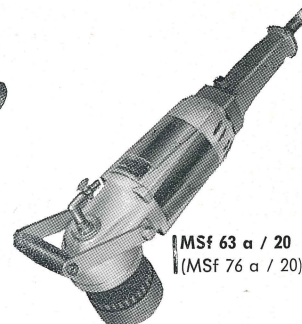
Type		Diameter of Grinding wheel		Speed R. P. M. no load	Input Watts	Output HP	fixing thread	Net weight			
standard voltages	low tension 42 Volts	in.	mm					lbs.	kgs.		
—/~	—	5 ³ / ₁₆	132	1700	750	0,7	M 14	11,2	5,5		
MSf 63 a/14	—	5 ³ / ₁₆	132	1700	750	0,7	M 20	11,2	5,5		
MSf 63 a/20	—	5 ³ / ₁₆	132	1700	1300	1,25	M 20	15,5	7,0		
MSf 76 a	—	5 ³ / ₁₆	132	1700	1300	1,25	M 20	15,5	7,0		
3~	3~	5 ³ / ₁₆	132	1500	620	0,61	M 20	16,5	7,5		
MSfx 107b¹⁾	MSfx 107 b K	5 ³ / ₁₆	132	1500	620	0,61	M 20	16,5	7,5		
MSfx 107a¹⁾	MSfx 107 a K	5 ³ / ₁₆	132	1000	620	0,61	M 20	16,5	7,5		

¹⁾ with reversing device Δ

Grinders with water supply for more than 42 Volts are to be used only in connection with isolating transformers
Machines equipped with 16 ft. (5 m) cable, 1 set of wrenches, 1 second handle.



MSf 63a/14



MSf 63 a / 20
(MSf 76 a / 20)



MSfx 107 b
MSfx 107 a

Accessories

	Description	suitable for	Order Reference	Diameter		Net weight		
				in.	mm	lbs.	kgs.	
cutting off	Cutting Wheels	grinders with 6600 up to 8600 r.p.m.	M 16-6 St M 16-8 St	7 9 ¹ / ₄	178 235	0,29 0,55	0,13 0,25	
	Movable cutting Device	type MSf 676, M 16-6 St.	MZ 62-1-2			4,9	2,2	
	Slotting Device	2 cutting wheels M 16-6 St	M 21-20-1	8 ⁷ / ₈	225	2,66	1,2	
	Flanges for cutting wheels, Wheel Guards, Bench Stand for cutting off: see page 17							

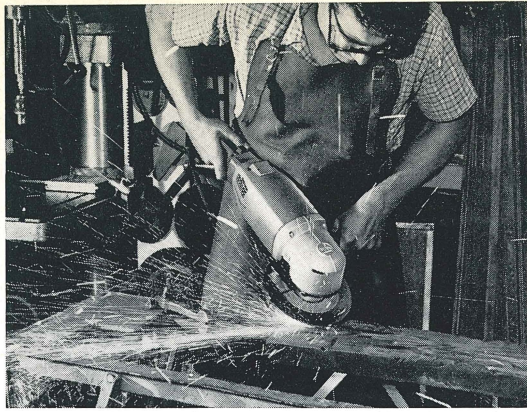
dry grinding	Flexible Grinding Wheels 8 mm for rough grinding 10 mm 6 mm	grinders with 6600 up to 8600 r.p.m.	M 28-14 St M 28-5 St M 28-4 St	7 7 9 ¹ / ₄	178 178 235	1,0 1,33 1,33	0,45 0,6 0,6	
	Cup Wheel, bakelite bond Cup Wheel, undulated	grinders up to 8600 r.p.m.	M 17-33 M 28-17 St	4 ³ / ₈ 4 ³ / ₈	110 110	1,79 1,09	0,8 0,49	
	Abrasive fibre backed Discs (grain 20-120)	elastic disc MZ 53-43-1 MZ 53-34-1 MZ 53-35-1	M 25-24 M 25-14 M 25-16	6 5 ⁷ / ₈ 9 ¹ / ₄	150 180 235	— — —	— — —	
	Polishing Steel Wheels M 14 M 20	grinders up to 1800 r.p.m.	MZ 53-41 MZ 53-42	7 ⁷ / ₈ 7 ⁷ / ₈	200 200	4,45 4,45	2,0 2,0	
	Elastic Discs, Flanges for cup wheels, Sponge Rubber Pads, Abrasive Papers: see page 18							

Steel Wire Brushes, Cup Wire Brushes, see page 18

wet grinding	Elastic intermediate Discs	grinders with 1000 up to 1700 r.p.m.	MZ 47-11-1 MZ 47-13-1	3 ³ / ₁₆ 2 ³ / ₄	80 70	0,67 0,67	0,3 0,3	
	Rotary Pads	MZ 47-11-1 MZ 47-13-1	MZ 47-12 MZ 47-14 MZ 47-18 MZ 47-15	5 ¹ / ₈ 4 3 ¹ / ₁₆ 4	130 100 78 100	0,44 0,35 0,35 0,35	0,2 0,16 0,16 0,16	
	Cup Wheels (ceramic bond)	MZ 47-14 MZ 47-18	M 22-18 M 22-19	4 ¹⁵ / ₁₆ 4	125 100	1,89 1,55	0,85 0,7	
	Grinding Wheels (ceramic bond) (ceramic bond = K) mineral bond = M)	MZ 47-12 MZ 47-14, MZ 47-15	M 22-7 M 22-17	5 ³ / ₁₆ 4	132 100	2,2 1,78	1,0 0,8	
	Glue	MZ 47 —	F 22-19	—	—	0,45	0,5	
	Profile Wheel, round Profile Wheel, pointed		M 18-11 K M 18-10 K	2 2	50 50	1,26 0,98	0,57 0,44	
	Intermediate Pieces for tool fixing	M 14/M 20 M 20/M 14	M 21-17 M 21-11	— —	M 14 M 20	0,11 0,11	0,05 0,05	
	Moss Rubber Pads, Felt Rings, Abrasive Papers, Glue, Angle Piece: see page 18							

Shears
Nibblers
Hack Saws

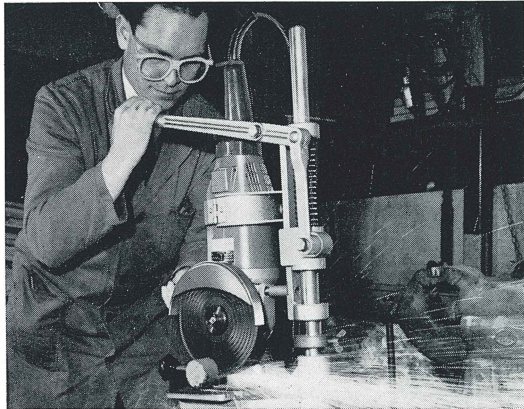
Plug Connections
Transformers



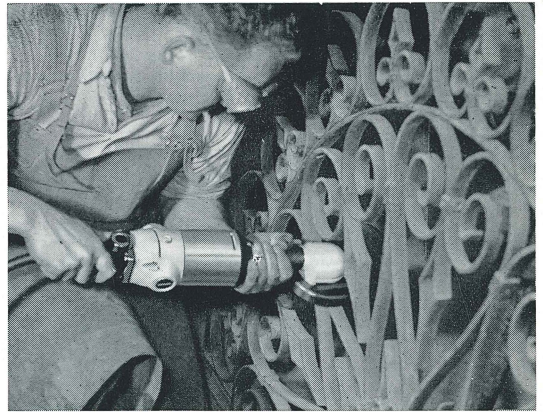
MSf 679 d



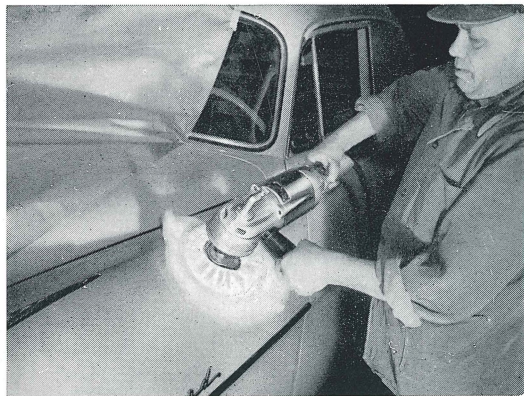
MSf 679 d



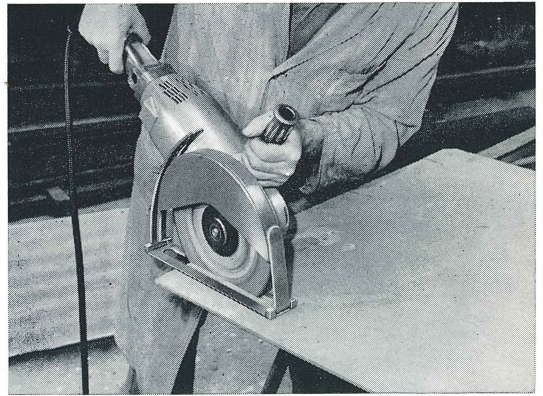
MSf 679 c and Cim 1 b



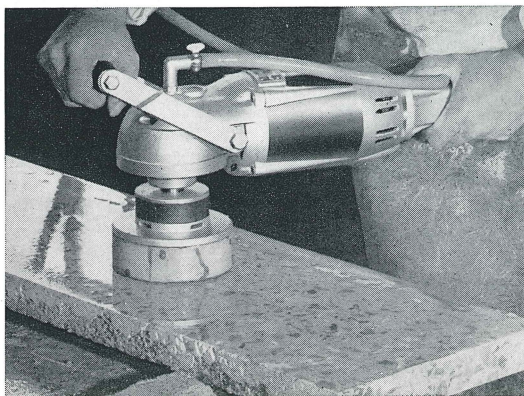
MSfv 656-1



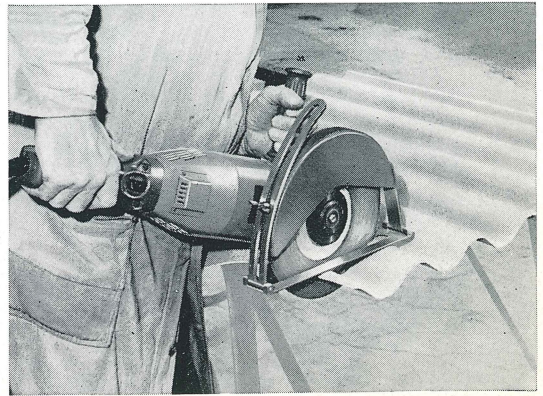
MSf 63 a/14



MSf 679



MSf 63 a/20



MSf 679



Electric Tools

Type of Current

- D.C. only
- ~ single-ph.A.C.
- /~ D.C./single-ph.A.C. (universal motor)
- 3 ~ Three-phase A.C.
- double insulated and radio suppressed

Do not forget when ordering or inquiring to state
THE TYPE OF CURRENT, VOLTAGE AND FREQUENCY

Sheet Metal Shears

Type		For sheet metal up to			Radius of smallest curve		Capacity		Incisions per min.	Input in Watts	Output in Watts	Net weight	
standard voltages	low tension 42 Volts	S. W. G.	in.	mm	in.	mm	ft./min.	m/min.				lbs.	kgs.
—/~	—/~												
QSz 636 □	QSz 736	14	5/64	2	3/4	20	10	3	1700	230	115	5,1	2,3
QSz 656-1 □	QSz 756-1	11	1/8	3	2	50	8	2,5	1800	480	265	12,2	5,5
QSz 663 □	QSz 63 K	7	3/16	4,5	2	50	5	1,5	1700	750	520	22	9,9
3 ~	3 ~												
QB 141 a	QB 141 a K	7	3/16	4,5	3 3/16	80	8	2,5	1200	1400	1100	110	50,0

QSz 636 □

QSz 656-1 □

Spare Knives

Order Reference normal sheet (50 kg/mm ²)		stainless steel (V 2A)		for	Net weight	
plunger blade	fixed blade	plunger blade	fixed blade		lbs.	kgs.
Z 37-29	Z 37-30	Z 37-39	Z 37-40	QSz 636	0,02	0,009
Z 37-4	Z 37-4	Z 37-25	Z 37-25	QSz 656-1	0,11	0,05
Z 37-17	Z 37-17	Z 37-26	Z 37-26	QSz 663	0,15	0,07
Z 37-37	Z 37-38	Z 37-35	Z 37-36	QB 141 a	0,22	0,1

Pedestal for QB 141 a: MZ 15-16, 15 kg

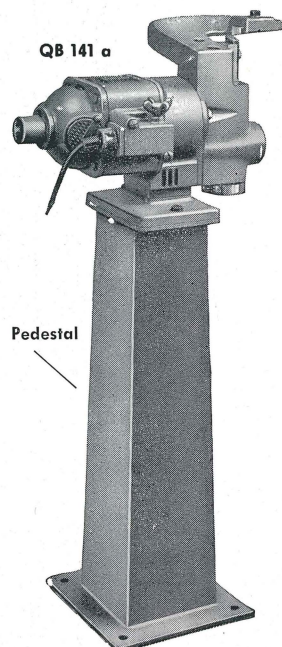
Guard for QSz 636: Q 2-7-2

Nibblers

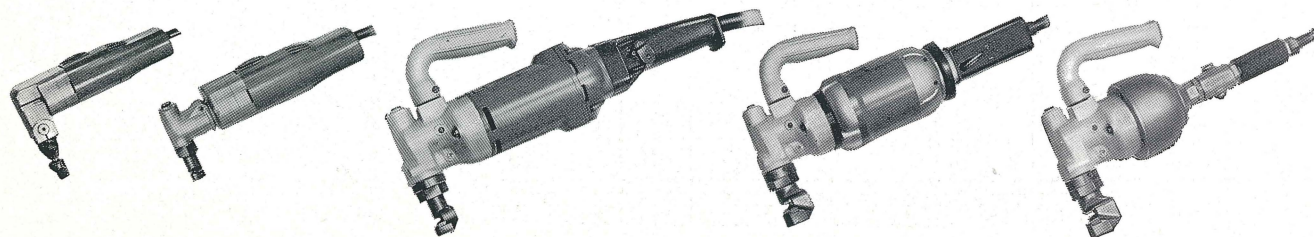
Type		For sheet metal up to			Radius of smallest curve		Capacity		Incisions per min.	Input in Watts	Output in Watts	Net weight	
standard voltages	low tension 42 Volts	S. W. G.	in.	mm	in.	mm	ft./min.	m/min.				lbs.	kgs.
—/~	—/~												
RSs 636 □	RSs 736	18	3/64	1,3	1/8	3,5	4	1,2	1100	230	115	4,2	1,9
RSs 636-1 □	RSs 736-1	18	3/64	1,3	3/4	20	6	1,7	1800	230	115	3,5	1,6
RSs 636-2 □ *	RSs 736-2 *)	18	3/64	1,3	3/4	20	6	1,7	1800	230	115	3,5	1,6
RSs 654-2 □	RSs 754-2	14	5/64	2	2	50	5	1,4	820	360	200	11	5,0
RSs 654-3 □ *	RSs 754-3 *)	14	5/64	2	2	50	5	1,4	820	360	200	11	5,0
RSs 60	RSs 60 K	11	1/8	3	4 3/4	120	4	1,3	700	500	250	12,8	5,8
with pneumatic motor:													
MOr 6-12		11	1/8	3	4 3/4	120		1,3	700	0,5 HP		14	4,85

Machines equipped with 10 ft. (3 m) cable

*) for corrugated iron



Pedestal



RSs 636 □

RSs 636-1 □
RSs 636-2 □
for corrugated iron

RSs 654-2 □
RSs 654-3 □
for corrugated iron

RSs 60

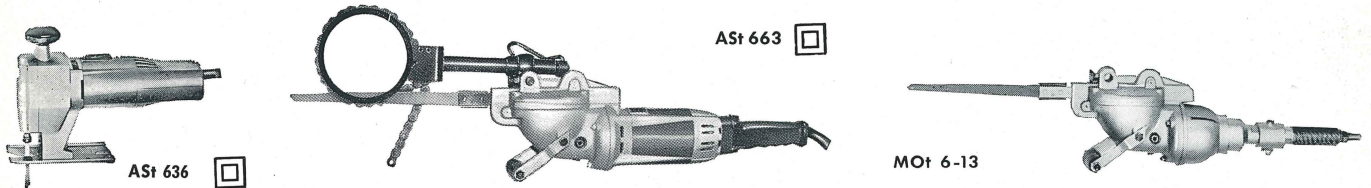
MOr 6-12
(pneumatic motor)

Shears
Nibblers
Hack Saws





Plug Connections
Transformers

Accessories for nibblers

Order Reference		suitable for		Net weight		Order Reference		suitable for		Net weight	
				lbs.	kgs.					lbs.	kgs.
Spare Knives						Spare Dies					
Q 4-18	{ RSs 636 RSs 636-1 RSs 636-2 RSs 654-2	0,04	0,02			Q 4-19	RSs 636	0,022	0,01		
Z 40-1, 5 mm φ						A 9-5	RSs 636-1	0,08	0,04		
Z 40-3, 7 mm φ		A 9-11	RSs 636-2			0,08	0,04				
		{ RSs 654-3 RSs 60 MOr 6-12	0,013			0,006	A 9-35-1	{ RSs 654-2 RSs 654-3	0,44	0,2	
Pin						A 9-24-1					
Q 4-16	RSs 636	0,03	0,014			{ RSs 60 MOr 6-12		0,72	0,33		
Supporting Table						Spare Inserts:					
Q 4-21	RSs 636	0,006	0,003			A 9-36	A 9-35-1	0,022	0,01		
Base for stationary use						A 9-25	A 9-24-1	0,066	0,03		
MZ 15-17-1	{ RSs 654-2 RSs 654-3	1,32	0,6								



Hack Saws

Type		Cutting capacity in./mm	Strokes per minute	Stroke of the saw blade		Input	Out- put	Net weight	
standard voltages	low tension 42 Volts			in.	mm	in Watts		lbs.	kgs.
 ASt 636	 ASt 736	softwood 2" (50 mm); hardwood 1 9/16" (40 mm); plywood 1 9/16" (40 mm); fibre 3/4" (20 mm); kraft paper 3/4" (20 mm); steel 5/32" (4 mm); sheet brass 3/8" (10 mm); aluminium sheet 3/8" (10 mm); resopal 5/64" (2 mm)	1600	3/4	20	230	115	4,7	2,1
Price includes 5 saw blades and 10 ft. (3 m) cable. Spare saw blades see leaflet A 619									
For cutting pipes up to 12" (305 mm) OD and profiles up to 10 5/8" (270 mm) height:									
 ASt 663	 ASt 63 K	wall thickness up to 5/8" (15 mm)	300	2 3/8	60	750	520	18,4	8,3
with pneumatic motor: MOt 6-13			330	2 3/8	60	1,5 HP	17 0	7,7	

Price includes 2 standard saw blades and 1 set of wrenches and 16 ft. (5 m) cable. MOt 6-13 without hose.

Saw Blades for ASst 636

Type	Z 22-35	Z 22-36	Z 22-37	Z 22-38	Z 22-39
For the cutting of	sheet steel, sheet-brass, aluminium sheet, copper sheet 3/32" (2 mm); fibre, plexiglas, plastics, cardboard 5/32" (4 mm); resopal 3/32" (2 mm)	sheet steel 5/32" (4 mm); aluminium sheet 1/8"-3/16" (3-8 mm); sheet-brass, copper sheet 1/8"-3/8" (3-10 mm); fibre, plastics, plexiglas 1/8"-5/16" (3-8 mm); plywood 1/8" (3 mm); eternit 3/32"-5/32" (2-4 mm)	plywood, wood fibre boards, hard and softwood 1" (25 mm); fibre, soft plastics 5/8" (15 mm); resopal pasted on	plywood, wood fibre boards, hardwood 1 9/16" (40 mm); softwood 2" (50 mm); soft plastics 1 1/4" (30 mm)	aluminium sheet 5/16"-3/8" (8-10 mm); eternit, insulation plates, plastics more than 5/32" (4 mm); fibre 5/16"-3/4" (8-20 mm)
Tooth pitch inches / mm	3/64 1	5/64 2	3/62 2,5	5/32 4	5/32 4
No. of teeth per inch	25,4	12,7	10	6,35	6,35
Total length inches / mm	3 1/8 80	3 1/8 80	3 1/2 90	3 1/2 90	3 1/2 90

Accessories for ASst 663 and MOt 6-13

Order Reference	Description	for clamping device	Length		Dist. of teeth mm	Weight		
			in.	mm		lbs.	kgs.	
Saw blades:								
Z 22-6	for steel and cast iron	a/c	12	300	1,6	0,132	0,06	
Z 22-7		a/c	16	400	1,6	0,275	0,125	
Z 22-31		a/c	12	300	2,1	0,176	0,08	
Z 22-9	for aluminium	d	8	200	3,2	0,132	0,06	
Z 22-29	for aluminium	a/c	16	400	3,2	0,275	0,125	
Z 22-30	for steel (with S 14-35-2)	b	21 ³ / ₁₆	530	2,1	0,319	0,145	
Z 22-10	for steel and cast iron	d	8	200	1,6	0,132	0,06	
Z 22-11	for corrugated iron	d	8	200	1,0	0,132	0,06	
Z 22-32	for wood	d	16	400	6,3	0,286	0,13	
Z 22-40	eternit etc.	b/d	21 ³ / ₁₆	530	6,3	0,319	0,145	
S 14-10-1	Clamping device for pipes up to 6" (150 mm) OD for a					4,9	2,2	
S 14-37-2	Clamping device for pipes up to 12" (305 mm) OD for b					10,1	4,6	
S 14-35-2	Saw blade guide for S 14-37-2					3,6	1,6	
S 14-20-2	Clamping device for profile up to 10 ⁵ / ₈ " (270 mm) height for c					7,3	3,3	
S 14-25-1	Support for free hand working for d					2,9	1,3	



Electric Tools

Accessories

Plug connections

2 pin plugs 15 A – 3 pin plugs 15 A – 220/380 V

Figure	Order Reference	pins	Net weight		
			lbs.	kgs.	
Pin plug fixed to machine					
1	EZ 28-13 a	2	0,51	0,23	
	EZ 28-13 b	3	0,51	0,23	
Socket fixed to machine					
2	EZ 28-17 a	2	0,6	0,268	
	EZ 28-17 b	3	0,6	0,268	
Pin plug					
3	EZ 28-14 a	2	0,62	0,28	
	EZ 28-14 b	3	0,62	0,28	
Socket coupler					
4	EZ 28-15 a	2	0,6	0,27	
	EZ 28-15 b	3	0,6	0,27	
Wall socket					
5	EZ 28-16 a	2	0,64	0,29	
	EZ 28-16 b	3	0,64	0,29	
Cable distributor					
6	EZ 28-19 a ¹⁾	2	0,45	2	
	EZ 28-19 b ²⁾	3	0,45	2	

¹⁾ with EZ 28-13a and 3 EZ 28-17a ²⁾ with EZ 28-13b and EZ 28-17b

¹⁾ with EZ 28-13a and 3 EZ 28-17a

²⁾ with EZ 28-13b and EZ 28-17b

2 pin plugs 25 A – 3 pin plugs 25 A – 42 V

Figure	Order Reference	pins	Net weight		
			lbs.	kgs.	
Pin plug fixed to machine					
1	EZ 28-34 a	2	0,5	0,23	
	EZ 28-34 b	3	0,5	0,23	
Socket fixed to machine					
2	EZ 28-35 a	2	0,6	0,27	
	EZ 28-35 b	3	0,6	0,27	
Pin plug					
3	EZ 28-36 a	2	0,62	0,28	
	EZ 28-36 b	3	0,62	0,28	
Socket coupler					
4	EZ 28-37 a	2	0,6	0,27	
	EZ 28-37 b	3	0,6	0,27	
Wall socket					
5	EZ 28-38 a	2	0,64	0,29	
	EZ 28-38 b	3	0,64	0,29	

3 pin plugs 60 A – 42 V

Pin plug fixed to machine				
7	EZ 28-90	3	2,2	1,0
Socket fixed to machine				
8	EZ 28-91	3	3,3	1,5
Wall socket				
9	EZ 28-92	3	5,5	2,5
Socket				
10	EZ 28-93	3	1,4	0,63

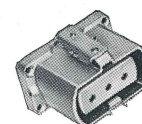
Protection Transformers for single phase A. C.

primary up to 250 V; secondary 42 V

Order Reference	Capacity AC	Length		Dimensions Height		Width		Weight	
		in.	mm	in.	mm	in.	mm	lbs.	kgs.
EZ 47-20	63	5 ¹ / ₈	130	8 ¹ / ₄	210	3 ⁹ / ₁₆	90	6,2	2,8
EZ 47-14	160	6 ³ / ₈	162	8 ¹ / ₄	210	5 ⁵ / ₁₆	135	11,3	5,1
EZ 47-15	250	6 ³ / ₈	162	8 ¹ / ₄	210	5 ⁵ / ₁₆	135	15,3	6,9
EZ 47-16	400	6 ³ / ₈	162	8 ¹ / ₄	210	6 ¹ / ₂	135	18,4	8,3
EZ 47-6	500	8 ¹ / ₂	215	10	255	6 ¹ / ₂	165	28,6	13,0
EZ 47-17	630	8 ¹ / ₂	215	10	255	7 ³ / ₈	165	30,5	13,7
EZ 47-18	800	11 ⁷ / ₁₆	290	14 ⁵ / ₁₆	360	7 ⁵ / ₈	195	44	20
EZ 47-9	1000	11 ⁷ / ₁₆	290	14 ⁵ / ₁₆	360	7 ⁵ / ₈	195	52,8	24
EZ 47-19	1500	11 ⁷ / ₁₆	290	14 ⁵ / ₁₆	360	7 ⁵ / ₈	195	62	28
EZ 47-12	1750	11 ⁷ / ₁₆	290	14 ⁵ / ₁₆	360	7 ⁵ / ₈	195	66	30
EZ 47-21	2000	16 ³ / ₈	410	15 ¹ / ₂	390	12 ³ / ₄	310	79,2	36



1



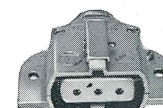
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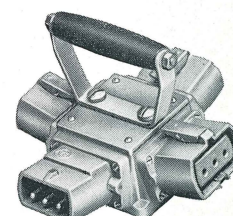
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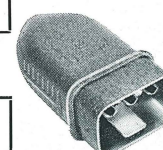
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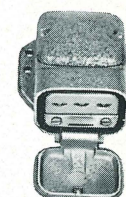
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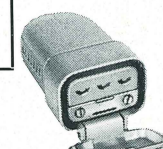
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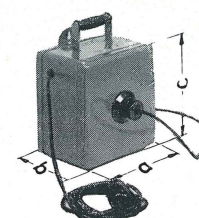
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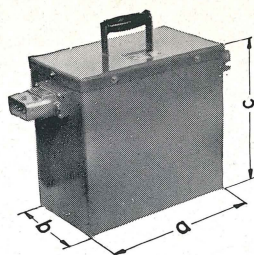


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10





Protection Transformers for 3 ph. A. C.

primary up to 250 V; secondary 42 V

Order Reference	Capacity VA	Length		Dimensions Width		Height		Weight		
		in.	mm	in.	mm	in.	mm	lbs.	kgs.	
EZ 48-1	200	11 ³ / ₄	300	7 ¹ / ₈	180	13 ¹ / ₄	335	17,8	8	
EZ 48-2	600	12 ⁵ / ₈	320	7 ¹ / ₄	185	14 ³ / ₄	375	42	19	
EZ 48-3	800	12 ⁵ / ₈	320	7 ¹ / ₄	185	14 ³ / ₄	375	49	22	
EZ 48-4	1000	12 ⁵ / ₈	320	7 ¹ / ₄	185	14 ³ / ₄	375	58	26	
EZ 48-5	1500	14 ¹ / ₄	360	7 ³ / ₄	195	16 ¹ / ₂	415	77,5	35	
EZ 48-6	2000	14 ¹ / ₄	360	7 ³ / ₄	195	16 ¹ / ₂	415	89	40	
EZ 48-7	3000	14 ¹ / ₄	360	7 ³ / ₄	195	16 ¹ / ₂	415	102	46	

Isolating Transformers for single ph. A. C.

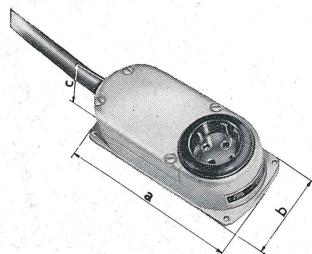
primary 220 V, secondary 220 V

EZ 52-3	600	9	230	6 ³ / ₄	170	13 ³ / ₄	350	33,4	15	
EZ 52-4	800	11 ¹ / ₂	290	7 ³ / ₄	195	14 ¹ / ₄	360	44,5	20	
EZ 52-1	1000	11 ¹ / ₂	290	7 ³ / ₄	195	14 ¹ / ₄	360	53,2	24	
EZ 52-5	1250	11 ¹ / ₂	290	7 ³ / ₄	195	14 ¹ / ₄	360	55,5	25	
EZ 52-2	1500	11 ¹ / ₂	290	7 ³ / ₄	195	14 ¹ / ₄	360	62,1	28	
EZ 52-6	2000	13 ¹ / ₈	330	8 ¹ / ₄	210	15 ¹ / ₂	390	79,2	36	
EZ 52-7	2500	13 ¹ / ₈	330	8 ¹ / ₄	210	15 ¹ / ₂	390	84,5	38	

Isolating Transformers for 3 ph. A. C.

primary 380 V 3 ~, secondary 380 V 3 ~

EZ 53-2	600	10 ¹ / ₄	260	6 ³ / ₄	170	13 ¹ / ₄	335	49	22	
EZ 53-1	800	10 ¹ / ₄	260	6 ³ / ₄	170	13 ¹ / ₄	335	53,2	24	
EZ 53-3	1000	10 ¹ / ₄	260	6 ³ / ₄	170	13 ¹ / ₄	335	62,1	28	
EZ 53-4	1250	10 ¹ / ₄	260	6 ³ / ₄	170	13 ¹ / ₄	335	63,2	29	



Radio Interference Suppressors

Order Reference	Amperes	Dimensions a		Dimensions b		Dimensions c		Net weight		
		in.	mm	in.	mm	in.	mm	lbs.	kgs.	
EZ 50-1-1	1,5	6 ¹ / ₄	158	2 ⁷ / ₈	72	3 ¹ / ₂	88	1,50	0,68	
EZ 50-2-1	5	6 ¹ / ₄	158	2 ⁷ / ₈	72	3 ¹ / ₂	88	1,50	0,68	

Price includes 10 ft. (3 m) cable and plug

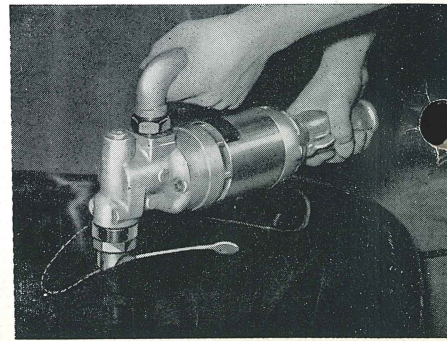
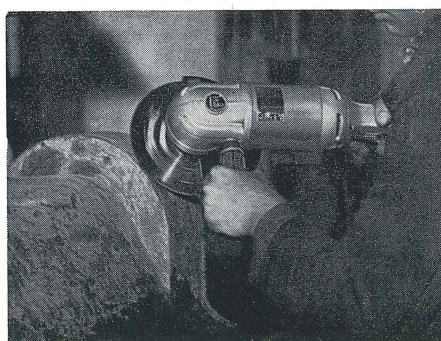
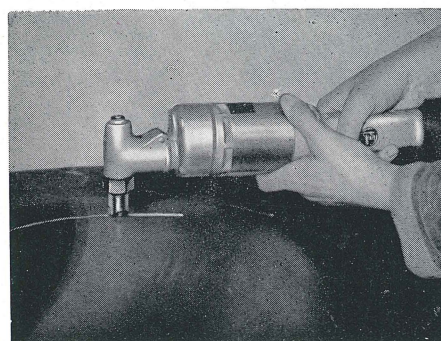
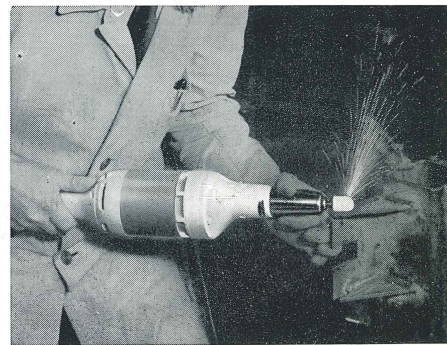


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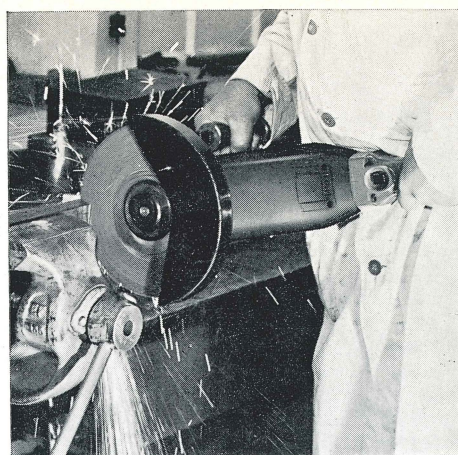
Hand Grinders (Straight Grinders) • Angle Grinders • Sheet Metal Shears • Nibblers

Frequency Converters • Plug Connections: SEE CATALOGUE A 80 e

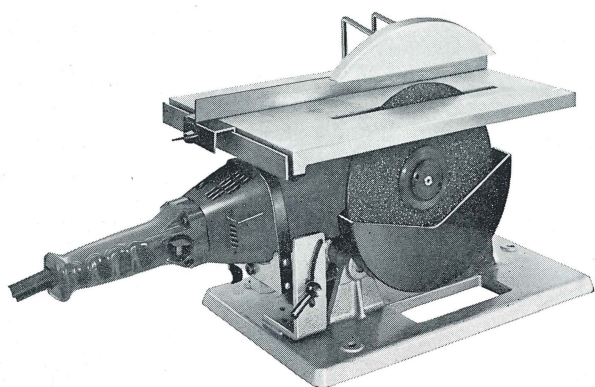




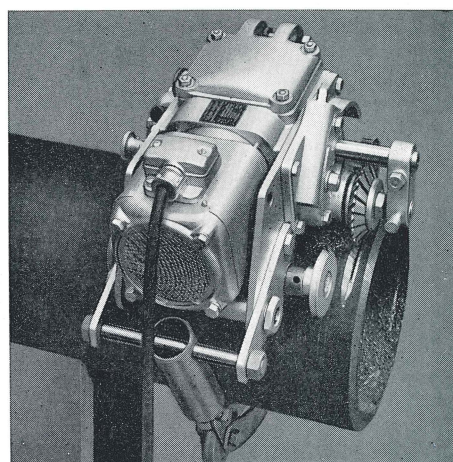
Power Hack Saw type ASf 663



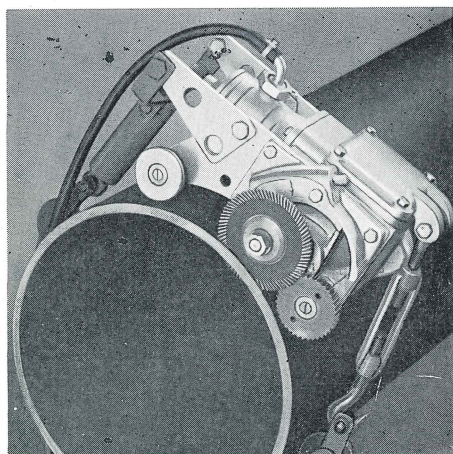
Cutting with Angle Grinder type MSf 679



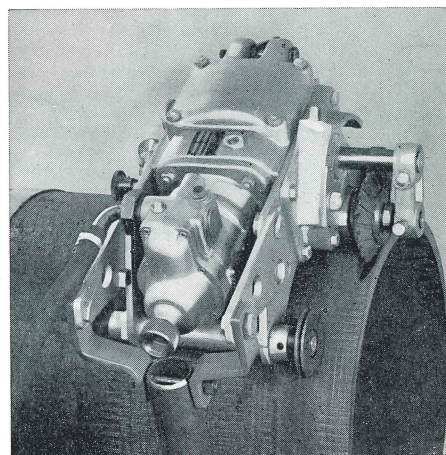
Cutting Table Ct 1a for cutting stone slabs with
Angle Grinder type MSf 679



Electric Pipe Saw for V-cuts type RBo 145-1 a



Pneumatic Pipe Saw for normal cuts type RMO 5



Pneumatic Pipe Saw for V-cuts type RMO 5 a

Pipe Saws, electrically or pneumatically driven
for normal and V-cuts on pipes up to 1400 mm (55") diameter

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